



TETRA TECH EM, INC.

EPA Region 5 Records Ctr.



208921

March 26, 2003

Mr. Michael Ribordy
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Emergency Response Branch
U.S. Environmental Protection Agency Region 5
77 West Jackson Blvd.
Chicago, IL 60604

**Subject: Letter Report
Sauget Sites H and I
Sauget, St. Clair County, Illinois
Technical Direction Document No. S05-0204-020
Tetra Tech Contract No. 68-W-00-129**

Dear Mr. Ribordy:

The Tetra Tech EM Inc. (Tetra Tech) Superfund Technical Assessment and Response Team (START) is submitting the enclosed letter report for Sauget Sites H and I in Sauget, St. Clair County, Illinois. If you have questions or comments regarding the report or require additional copies, please contact me at (314) 892-6322 or Thomas Kouris at (312) 946-6431.

Sincerely,

Thomas G. Binz
Tetra Tech START Project Manager

TGB/ms

Enclosure

cc: Lorraine Kosik, U.S. EPA START Program Officer
Thomas Kouris, Tetra Tech START Program Manager

Sauget Area 1

Sauget, ILL

LETTER REPORT
SAUGET SITES H and I
SAUGET, ST. CLAIR COUNTY, ILLINOIS

Prepared for:

U.S. ENVIRONMENTAL PROTECTION AGENCY
Region 5 Emergency Response Branch
77 West Jackson Boulevard
Chicago, IL 60604

| | |
|------------------------|--------------------|
| TDD No.: | S05-0204-020 |
| Date Prepared: | February 26, 2003 |
| Contract No.: | 68-W-00-129 |
| Prepared by: | Tetra Tech EM Inc. |
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CONTENTS

| <u>Section</u> | <u>Page</u> |
|--|-------------|
| ABBREVIATIONS AND ACRONYMS | iii |
| 1.0 INTRODUCTION | 1 |
| 2.0 SITE BACKGROUND | 2 |
| 3.0 SITE ACTIVITIES | 5 |
| 3.1 FRIDAY, JULY 12, 2002 | 5 |
| 3.2 SATURDAY, JULY 13, 2002 | 5 |
| 3.3 SUNDAY, JULY 14, 2002 | 8 |
| 3.4 MONDAY, JULY 15, 2002 | 8 |
| 3.5 TUESDAY, JULY 16, 2002 | 9 |
| 4.0 ANALYTICAL RESULTS | 10 |
| 5.0 SUMMARY | 26 |
| REFERENCES | 27 |
| <u>Appendix</u> | |
| A PHOTOGRAPHIC LOG | |
| B SAMPLE SHIPMENT AND CHAIN-OF-CUSTODY RECORDS | |

FIGURES

| <u>Figure</u> | <u>Page</u> |
|---|-------------|
| 1 SITE LOCATION MAP | 3 |
| 2 SITE LAYOUT AND TRENCH LOCATION MAP | 4 |

TABLES

| <u>Table</u> | <u>Page</u> |
|--|-------------|
| 1 TRENCH SAMPLING SUMMARY | 6 |
| 2 SUMMARY OF ANALYTICAL RESULTS FOR METALS | 11 |
| 3 SUMMARY OF ANALYTICAL RESULTS FOR SVOCs | 15 |
| 4 SUMMARY OF ANALYTICAL RESULTS FOR VOCs, PESTICIDES, AND PCBs | 19 |

Abbreviations and Acronyms

| | |
|------------|--|
| Cerro | Cerro Copper Products Company |
| CLP | Contract Laboratory Program |
| bgs | Below ground surface |
| ER | Environmental Restoration, Inc. |
| FID | Flame Ionization Detector - Toxic Vapor Analyzer |
| IEPA | Illinois Environmental Protection Agency |
| Monsanto | Monsanto Chemical Company |
| MS/MSD | Matrix spike/matrix spike duplicate |
| PAH | Polynuclear aromatic hydrocarbon |
| PCB | Polychlorinated biphenyl |
| PID | Photoionization detector |
| ppm | Part per million |
| PRG | Preliminary remediation goal |
| PRP | Potentially responsible party |
| RBC | Risk-based concentration |
| RPM | Remedial project manager |
| SOW | Statement of Work |
| START | Superfund Technical Assessment and Response Team |
| SVOC | Semivolatile organic compound |
| Tetra Tech | Tetra Tech EM Inc. |
| TDD | Technical Direction Document |
| URS | URS Corporation |
| U.S. EPA | U.S. Environmental Protection Agency |
| VOC | Volatile organic compound |

1.0 INTRODUCTION

The Tetra Tech EM Inc. (Tetra Tech) Superfund Technical Assessment and Response Team (START) has prepared this letter report in accordance with the requirements of Technical Direction Document (TDD) No. S05-0204-020 issued by the U.S. Environmental Protection Agency (U.S. EPA). This TDD requires START to conduct sample collection and oversight activities at Sauget Sites H and I in Sauget, St. Clair County, Illinois. START was tasked to prepare a safety plan, document on-site conditions through written logbook notes and photographs, conduct air monitoring, collect samples from excavated trenches, and prepare samples for shipment to the U.S. EPA-approved Contract Laboratory Program (CLP) laboratories. Specific tasks included: (1) procuring a contractor to excavate trenches through areas of known landfill pits; (2) sampling excavated materials; (3) placing excavated material back into the trenches; (4) grading or covering the excavated areas with crushed limestone or re-seeding the areas with a Fescue grass mixture for vegetation stabilization and then covering the seeded areas with straw; and (5) packaging samples for shipment and laboratory analysis. Site activities were conducted by START members Mechelle Anderson, Thomas Binz, Lauren Huelsmann, Bryan Williams, and Annie Pestro, along with the equipment operator Ricky Johnson of the Tetra Tech subcontractor, Environmental Restoration, Inc. (ER).

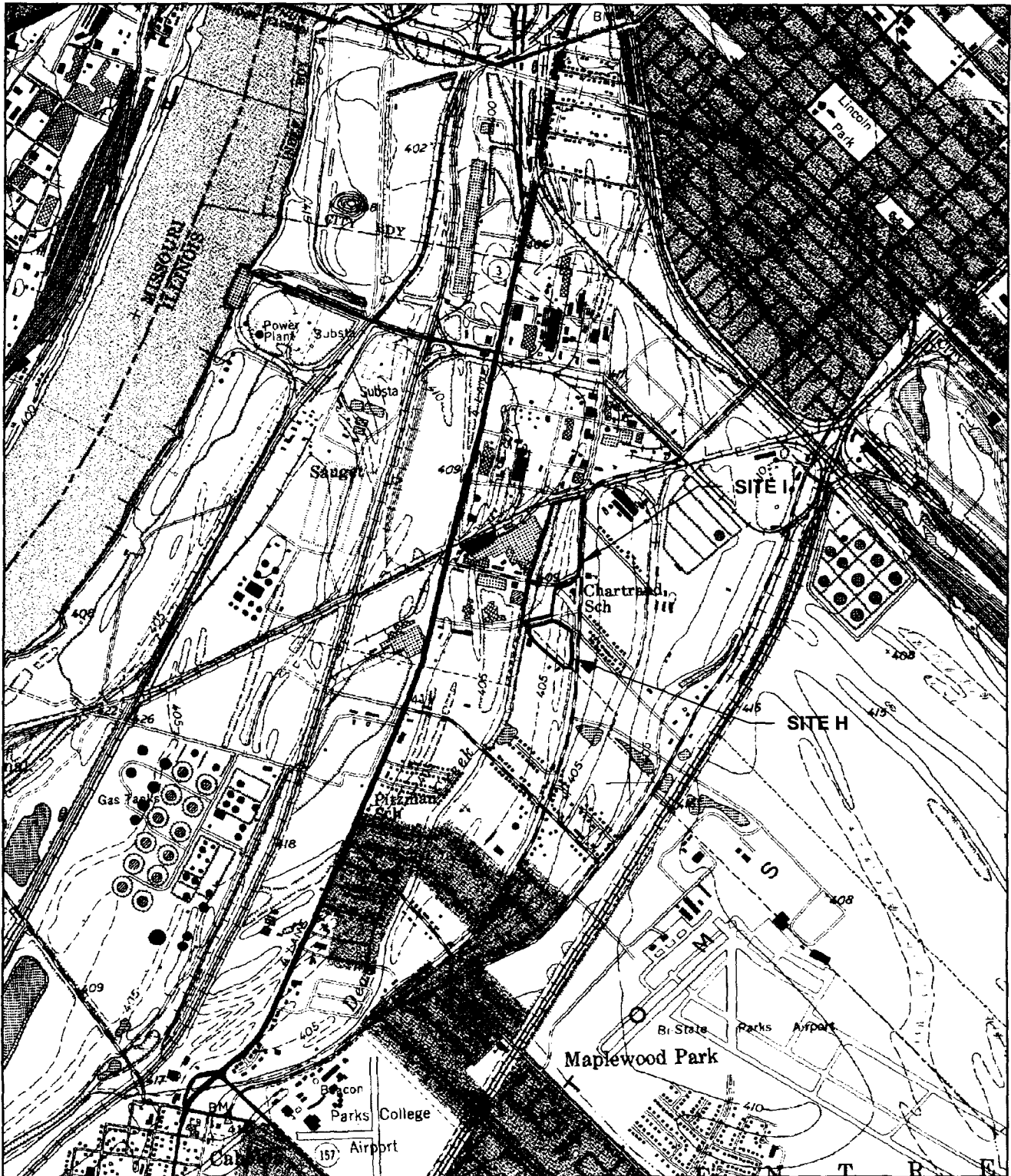
This letter report discusses the site background, site activities, and sample analytical results, and provides a summary of START's activities. References used to prepare this report are cited at the end of text. Appendixes A and B present a photographic log of site activities and sample shipment chain-of-custody records, respectively.

2.0 SITE BACKGROUND

Sites H and I are known collectively as the “Sauget-Monsanto Landfills.” The inactive landfills cover approximately 26 acres directly across the Mississippi River from St. Louis, Missouri, in west-central St. Clair County, Illinois. The sites are divided by “old” Queeny Avenue and are located along Falling Springs Road. Site I is located primarily on Cerro Copper Products Company (Cerro) property and is bordered by Falling Springs Road on the east, the Alton and Southern Railroad on the north, Cerro property on the west, and Queeny Avenue on the south. Site H is bordered by Keeley Construction Company on the south, Metro Construction Company on the west, Queeny Avenue on the north, and Falling Springs Road on the east. The Site H landfill extends approximately 1,250 feet south of the intersection of “new” Queeny Avenue and Falling Springs Road (see Figures 1 and 2)

Previous to their use as landfills, the sites consisted of a series of sand and gravel pits. According to two “Notification of Hazardous Waste Site” forms submitted by the Monsanto Company (Monsanto) to U.S. EPA, the sites accepted chemical wastes from the company’s Queeny and Krummrich plants in St. Louis and Sauget, respectively. Historical aerial photographs show landfill operations at Sites H and I prior to 1936. Aerial photographs also show landfilling activities decreasing by the late 1950s consistent with Monsanto’s “Notification of Hazardous Waste” forms. A preliminary investigation of the two sites including, soil sampling activities, occurred in 1987. Title information indicates that Leo Sauget was the principal owner and alleged operator after late 1931. To date, no removal actions have occurred at either site.

G:\G9009\LD108004--Dead Creek\ SITE LOCATION -Dead Creek.dwg 10/28/2002 joel.peters CH



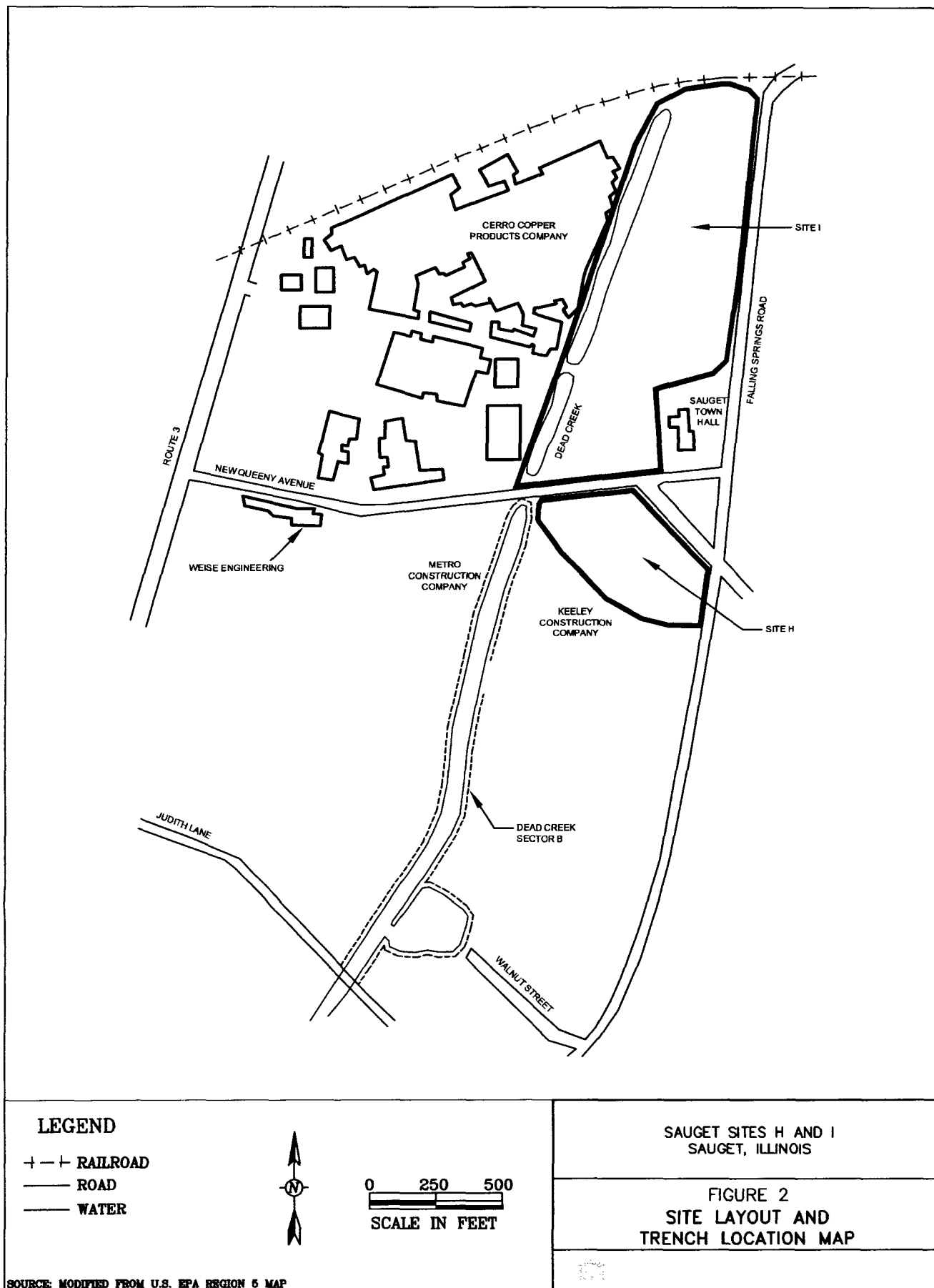
0 1000 2000
SCALE IN FEET



SAUGAT SITES H AND I
SAUGAT, ILLINOIS

FIGURE 1
SITE LOCATION MAP

SOURCE: MODIFIED FROM USGS, CAHOKIA, ILLINOIS-MISSOURI QUADRANGLE, 1993



3.0 SITE ACTIVITIES

START conducted field activities at Sauget Sites H and I from July 12 through July 16, 2002. The field activities consisted of trenching and sampling conducted in order to identify landfill-related contamination. Activities on each day are discussed in detail below. Table 1 presents a sampling summary.

In accordance with the site safety plan, the air upwind and downwind of each trench location was monitored for organic vapor emissions using a Thermo Environmental, Inc., 580 EZ photoionization detector (PID) and a Thermo- Environmental, Inc., TVA-1000B Toxic Vapor Analyzer flame ionization detector (FID).

3.1 FRIDAY, JULY 12, 2002

On July 12, 2002, U.S. EPA personnel Michael Ribordy and Jon Beihoffer met START and ER personnel at Site I. The team marked the location of two areas to be trenched and sampled on the following day and discussed exclusion and contamination reduction work zones, parking, site access, and security requirements. Figure 2 of this report illustrates the trench locations.

3.2 SATURDAY, JULY 13, 2002

U.S. EPA and START mobilized to Site I to begin trench excavation and sampling, including calibrating air monitoring equipment and meeting to discuss potential chemical and physical safety hazards. Also present on site were Mr. Matthew Foresman from URS Corporation (URS), who was representing Solutia, a potentially responsible party (PRP) for Sites H and I, and Mr. Joe Grana, who was representing Cerro. After the on-site safety meeting and with the approval of U.S. EPA remedial project manager (RPM) Mike Ribordy, excavation began at trench 1.

TABLE 1
TRENCH SAMPLING SUMMARY
SAUGET SITES H AND I
SAUGET, ST. CLAIR COUNTY, ILLINOIS

| Sample No. | U.S. EPA Organic Sample No. | U.S. EPA Inorganic Sample No. | Sample Description | Site/Trench |
|------------|-----------------------------|-------------------------------|-----------------------------|-------------|
| WS-01-01 | E21K0 | ME21K0 | Filter cake material | I/1 |
| WS-01-02 | E21K1 | ME21K1 | Crystalline material | I/1 |
| WS-01-03 | E21K2 | ME21K2 | Filter cloth material | I/1 |
| WS-01-04 | E21K3 | ME21K3 | Sludge-like material | I/1 |
| WS-01-05 | E21K4 | ME21K4 | Granular beads | I/1 |
| WS-01-06 | E21K5 | ME21K5 | Tar-like substance in drum | I/1 |
| WS-01-07 | E21K6 | ME21K6 | Filter paper | I/1 |
| WS-01-08 | E21K7 | ME21K7 | Purple material | I/1 |
| WS-01-09 | E21K8 ^a | ME21K8 | Yellow crystalline rock | I/1 |
| WS-02-01 | E21K9 | ME21K9 | Filter cake and paper | I/2 |
| WS-02-02 | E21L0 | ME21L0 | Cement-like material | I/2 |
| WS-03-01 | E21L1 | ME21L1 | Shiny, pumice-like material | I/3 |
| WS-03-02 | E21L2 | ME21L2 | Black, oily material | I/3 |
| WS-01 | E21L3 | ME21L3 | Soil MS/MSD | I/1 |
| H/WS-01-01 | E21L4 | ME21L4 | Filter paper | H/1 |
| H/WS-01-02 | E21L5 | ME21L5 | Crystalline material | H/1 |
| H/WS-01-03 | E21L6 | ME21L6 | Catalyst beads | H/1 |
| H/WS-01-04 | E21L7 | ME21L7 | Soil | H/1 |
| H/WS-01-05 | E21L8 | ME21L8 | Sand-like material | H/1 |
| H/WS-02-06 | E21L9 | ME21L9 | Soil MS/MSD | H/2 |
| H/WS-02-07 | E21M0 | ME21M0 | Soil | H/2 |
| H/WS-02-08 | E21M1 | ME21M1 | Soil | H/2 |

Notes:

MS/MSD = Matrix spike/matrix spike duplicate
U.S. EPA = United States Environmental Protection Agency

^a Sample was not analyzed because of concentrated waste composition matrix.

Trenches were excavated using a tracked excavator (trackhoe) that removed soil in 1-to-2 foot-thick lifts. All excavated materials were stockpiled on plastic sheeting for future placement back into the excavation at the approximate location of initial removal. Fifteen to twenty-foot-long sections were consecutively excavated and backfilled to minimize soil stockpiles. The former landfill contained a 0.5 to 1-foot-thick layer of crushed gravel with an underlying layer of non-native fill materials that included used bricks and refractory brick materials generally interspersed with expended coal (clinker), wood products (such as used railroad ties and scrap lumber), rubber hoses, scrap steel, and steel-braided wire (including wrapped copper wire).

A white, crystalline powder substance was encountered in trench 1 at 6 feet bgs. The water table was located at 7 feet bgs. Samples WS-01-01, WS-01-02, and WS-01-03 were collected from this location. After the samples were collected, the trench was partially backfilled and excavation continued northeast. Two drums were also excavated from trench 1 on this day. One drum was in very poor condition and contained a nonvolatile, tar-like substance. A sample of the tar-like substance was collected (WS-01-06). Samples of a sludge-like material (WS-01-04), granular beads (WS-01-05), filter paper (WS-01-07), purple material (WS-01-08), and yellow crystalline rock (WS-01-09) were collected from trench 1. Sample WS-01, a soil sample, was collected as an MS/MSD from this trench1.

U.S. EPA and START collected each sample into three 8-ounce sample jars. U.S. EPA and URS representative Mr. Foresman each received one jar from each set of sample containers. START labeled and prepared its samples and placed them into coolers preserved at 4° C for delivery to a sample management and control location at the U.S. EPA temporary field office located at the former Lefton Iron & Metal site in East St. Louis, Illinois. From the Lefton Iron & Metal site, the samples were delivered via overnight delivery to the CLP laboratories.

At the end of the work day, stockpiled materials were returned to the trench. Trench 1's final dimensions were 37 feet long and 4 feet, 7 inches wide.

3.3 SUNDAY, JULY 14, 2002

START team members met at Site I and also visited the Lefton Iron & Metal site to prepare and document samples collected the previous day. Excavation activities began at trench 2. A sample of presumed filter cake with filter paper media was encountered and labeled as WS-02-01. A drum in poor condition was discovered that contained a cement-like substance (WS-02-02). START scanned the drum using the PID and found the substance to be non-volatile. Groundwater was encountered at 7 feet bgs. The two samples were placed into a cooler, preserved to 4° C, and delivered to the Lefton Iron & Metal site. Excavation at trench 2 then ceased and the trench was backfilled. Trench 2's final dimensions were 57 feet long and 4.5 feet wide.

The excavation of trench 3 then began. Groundwater was encountered at 12 feet bgs. A shiny, pumice-like material that was light and easily breakable was sampled (WS-03-01). Sample WS-03-02 consisted of black oily material that had a distinct petroleum odor. Excavation at trench 3 then ceased, and the trench was backfilled with the stockpiled material. Trench 3's final dimensions were 32 feet long and 4.5 feet wide.

Trench 4 was initiated. Groundwater was encountered at 9 feet, 4 inches bgs. A drum was encountered but not sampled because of the lack of sample volume. Trench 4 was backfilled without any samples being collected. All samples collected were delivered to the Lefton Iron & Metal site. Trench 4's final dimensions were 30 feet long and 4.5 feet wide.

3.4 MONDAY, JULY 15, 2002

Temporary caution tape was placed around the perimeter of Site H as a barrier to site access by the general public. Support equipment was set up in an upwind location along Queeny Avenue.

Excavation of trench 1 began. At 5 feet bgs, filter paper and white crystalline material were encountered and sampled (H/WS-01-01 and H/WS-01-02, respectively). Groundwater was encountered at 9 feet, 1 inch bgs. START then directly scanned an oily, sludge material removed from trench 1 with the PID and registered a maximum reading of 12.70 ppm. A paper document clearly labeled from Monsanto was

uncovered from the trench, labeled as H/PD-01-01, and given to U.S. EPA. Soil and sand-like materials were then sampled (H/WS-01-04 and H/WS-01-05, respectively). Trench 1 was backfilled with stockpiled material. Trench 1's final dimensions were 54 feet long and 4.5 feet wide.

Trench 2 was then excavated. At approximately 9 feet 4 inches bgs, a white crystalline material was encountered. An MS/MSD sample was collected (H/WS-02-06). Two soil samples were also collected (H/WS-02-07 and H/WS-02-08). The RPM suspended the excavation of trench 2, which was backfilled. Trench 2's final dimensions were 32 feet long and 4.5 feet wide. START personnel decontaminated equipment and shipped samples collected to the CLP laboratories.

3.5 TUESDAY, JULY 16, 2002

Restoration of the trenches at Sites H and I was conducted on this day. START team members collected debris from both sites. Both trenches at Site H had a noticeable pesticide-like odor. ER began collecting debris from both trenches. U.S. EPA and members of the U.S. Department of Justice DOJ arrived at the site. Mr. Ribordy, the U.S. EPA RPM, was concerned about the pesticide-like odor and requested additional clean dirt be delivered to the site to cover the trenches. Restoration activities consisted of grading soil and applying a seed Fescue mixture and straw to the trench areas. While restoration of Site H took place, START proceeded to Site I to ensure that restoration there was complete. START team members then proceeded to the Lefton Iron & Metal site to prepare samples for shipment to the CLP laboratories.

4.0 ANALYTICAL RESULTS

As specified under the TDD, START obtained analytical results for samples collected at Sauget Sites H and I. July 13, 14, and 15, 2002. The samples were analyzed by the CLP laboratories American Analytical & Technical Services, Inc., of Broken Arrow, Oklahoma, and Clayton Environmental Consultants, Inc., of Novi, Michigan. All samples were analyzed for total metals, volatile organic compounds (VOC), semivolatile organic compounds (SVOC), pesticides, and polychlorinated biphenyls (PCB). All samples except H/WS-02-07 and H/WS-02-08 were analyzed using CLP Statement of Work ILM04.1 procedures. Samples H/WS-02-07 and H/WS-02-08 were analyzed using CLP SOW OLM04.2 procedures. Tables 2 through 4 summarize laboratory results. Bolded, italicized, and shaded results exceed the screening levels.

Lead; mercury; and 1,1'-biphenyl results were compared to U.S. EPA preliminary remediation goals (PRG) for direct contact exposure (industrial soil) (U.S. EPA 2002a). All other results were compared to U.S. EPA's risk-based concentrations (RBC) (U.S. EPA 2002b).

Because calcium, magnesium, and potassium are essential nutrients, concentrations of these analytes were not compared to U.S. EPA PRGs or RPCs; therefore, results for these analytes are not presented in Table 2. Endrin ketone results were screened against the RBC because endrin ketone is a byproduct, metabolic product, and degradation product of endrin. Results for phenanthrene, a three-ring noncarcinogenic polynuclear aromatic hydrocarbon (PAH), were compared to the RBC for anthracene because anthracene is also a three-ring noncarcinogenic PAH. Sample WS-02-02 was not analyzed for SVOCs, VOCs, pesticides, or PCBs because of the lack of sample volume.

TABLE 2
SUMMARY OF ANALYTICAL RESULTS FOR METALS
SAUGET SITES H AND I
SAUGET, ST. CLAIR COUNTY, ILLINOIS

| Analytical Parameter | Screening Level | Sample No. | | | | | | | | | |
|----------------------|-----------------|---------------|----------|-------------|----------|----------|----------|---------------|-------------|----------|---------------|
| | | WS-01-01 | WS-01-02 | WS-01-03 | WS-01-04 | WS-01-05 | WS-01-06 | WS-01-07 | WS-01-08 | WS-01-09 | WS-01-10 |
| Aluminum | 204,400 | 690 | 4,660 | 105 | 264 | 1,650 | 51.3 J | 484 | 2,240 | 46.2 J | 492 |
| Antimony | 81.76 | 0.70 U | 8.5 | 0.90 U | 1.0 U | 0.62 U | 0.85 | 0.69 U | 4.8 | 0.60 U | 0.71 U |
| Arsenic | 3.815 | 1.1 | 2.9 | 14.7 | 2.0 | 1.8 | 0.47 U | 2.0 | 11.8 | 0.40 U | 1.2 |
| Barium | 14,308 | 62,800 | 637 | 33.0 | 12.0 | 19.4 | 1.9 | 49,200 | 6,490 | 79.8 | 58,800 |
| Beryllium | 408.8 | 0.23 U | 0.46 U | 0.30 U | 0.34 U | 0.26 | 0.23 U | 0.23 U | 0.50 U | 0.20 U | 0.24 U |
| Cadmium | 102.2 | 0.46 | 13.6 | 0.30 U | 2.6 | 0.21 U | 0.23 U | 1.1 | 3.3 | 0.20 U | 0.40 |
| Chromium | 613.2 | 9.8 | 63.8 | 2.3 J | 6.5 J | 4.3 J | 14.5 | 9.7 J | 32.4 | 0.55 J | 8.7 J |
| Cobalt | 4,100 | 4.8 R | 7.0 J | 64 J | 1.6 J | 1.7 J | 1.8 J | 1.4 R | 55.5 J | 0.40 UJ | 3.7 R |
| Copper | 8,176 | 18.4 | 307 | 7.0 | 96.3 | 10.7 | 50.2 | 9.8 | 658 | 3.9 | 7.0 |
| Lead | 750 | 55.3 | 333 | 81.7 | 29.1 | 1.1 | 0.80 | 17.2 | 896 | 6.7 | 1.8 |
| Manganese | 4,088 | 16.5 | 170 | 29.8 | 88.6 | 21.4 | 71.3 | 6.1 | 110 | 1.6 | 4.5 |
| Mercury | 62 | 0.54 | 0.12 U | 0.072 U | 0.090 U | 0.050 U | 0.060 U | 0.060 VU | 0.48 J | 0.40 U | 0.050 U |
| Nickel | 4,088 | 62.1 | 442 | 35.9 | 38.3 | 6.7 | 23.9 | 7.7 J | 235 | 15.9 | 7.3 J |
| Selenium | 1,022 | 0.70 U | 6.6 | 0.90 U | 1.1 | 0.62 U | 1.9 | 0.69 U | 1.9 | 0.60 U | 0.72 U |
| Silver | 1,022 | 0.23 U | 0.87 | 1.2 | 0.34 U | 0.21 U | 0.23 U | 0.23 U | 3.1 | 0.20 U | 0.24 U |
| Thallium | 14.31 | 0.70 U | 1.4 UJ | 0.90 U | 1.5 | 0.62 U | 0.70 U | 0.69 U | 1.5 U | 0.60 U | 0.72 U |
| Vanadium | 1,430.8 | 16.4 | 12.5 | 1.2 | 1.9 | 10.8 | 0.45 | 21.0 | 17.3 | 0.32 | 19.5 |
| Zinc | 61,000 | 109 J | 1,370 J | 43.7 J | 101 J | 60.4 J | 29 J | 87.7 J | 2,850 J | 26.9 J | 12.8 J |

TABLE 2 (Continued)

SUMMARY OF ANALYTICAL RESULTS FOR METALS
SAUGET SITES H AND I
SAUGET, ST. CLAIR COUNTY, ILLINOIS

| Analytical Parameter | Screening Level | Sample No. | | | | | | | | |
|----------------------|-----------------|---------------|--------------|--------------|--------------|----------------|------------|-------------|----------------|------------|
| | | WS-02-01 | WS-02-02 | WS-03-01 | WS-03-02 | H/WS-01-01 | H/WS-01-02 | H/WS-01-03 | H/WS-01-04 | H/WS-01-05 |
| Aluminum | 20,400 | 314 J | 960 | 34.3 J | 13.900 | 464 | 1.100 | 19.400 | 635 | 61.9 |
| Antimony | 81.76 | 0.82 U | 2.3 | 1.0 | 2.7 | 0.71 U | 0.68 U | 0.85 U | 0.67 U | 0.61 U |
| Arsenic | 3.815 | 0.54 U | 0.69 | 3.5 | 4.1 | 0.83 | 1.3 | 26.6 | 0.63 | 0.41 U |
| Barium | 14,308 | 70,700 | 58.1 | 28.6 | 2.110 | 102,000 | 82.9 | 1.010 | 133,000 | 31.6 |
| Beryllium | 408.8 | 0.27 U | 0.21 U | 0.26 U | 0.22 U | 0.24 U | 0.23 U | 0.28 U | 0.22 U | 0.20 U |
| Cadmium | 102.2 | 0.80 | 0.21 U | 0.29 | 2.0 | 0.24 U | 0.60 | 15.9 | 0.34 | 0.46 |
| Chromium | 613.2 | 5.6 J | 1,330 | 15.7 | 27.1 | 3.9 J | 8.3 | 142 | 4.6 J | 0.66 J |
| Cobalt | 4,100 | 4.6 R | 0.91 J | 0.52 UJ | 4.2 J | 15.5 R | 3.9 J | 73.3 J | 74.9 J | 0.41 UJ |
| Copper | 8,176 | 5.8 | 21.5 | 9,600 | 3.050 | 5.2 | 34.3 | 154 | 7.4 | 7.8 |
| Lead | 750 | 2.2 | 14.1 | 33.6 | 1,960 | 1.6 | 171 | 74.3 | 5.0 | 12.2 |
| Manganese | 4,088 | 134 | 197 | 1.2 | 94.4 | 31.2 | 38.5 | 144 | 22.1 | 26.2 |
| Mercury | 62 | 0.070 U | 0.050 U | 0.35 | 4.1 | 0.050 U | 0.050 U | 0.30 | 0.060 U | 0.050 U |
| Nickel | 4,088 | 4.9 J | 10.6 J | 2.2 J | 27.3 | 3.5 J | 8.2 | 21.0 | 6.0 J | 2.4 J |
| Selenium | 1,022 | 0.82 U | 0.62 U | 5.7 | 0.99 | 0.71 U | 0.68 U | 1.5 J | 0.67 U | 1.1 J |
| Silver | 1,022 | 0.27 U | 0.23 | 6.1 | 0.90 | 0.24 U | 0.23 U | 0.28 U | 0.22 U | 0.20 U |
| Thallium | 14.31 | 0.82 U | 1.5 | 0.77 U | 0.65 U | 0.71 U | 0.68 U | 0.85 U | 0.67 U | 0.61 U |
| Vanadium | 1,430.8 | 8.6 | 15.3 | 0.28 | 15.5 | 23.3 | 70.9 | 52.6 | 13.2 | 0.28 |
| Zinc | 61,000 | 10.5 J | 0.62 R | 2.7 J | 227 J | 7.8 J | 146 J | 1,210 J | 29.8 J | 53.0 J |



TABLE 2 (Continued)

**SUMMARY OF ANALYTICAL RESULTS FOR METALS
SAUGET SITES H AND I
SAUGET, ST. CLAIR COUNTY, ILLINOIS**

| Analytical Parameter | Screening Level | Sample No. | | |
|----------------------|-----------------|-------------|-------------|------------|
| | | H/WS-02-06 | H/WS-02-07 | H/WS-02-08 |
| Aluminum | 20,400 | 2.840 | 4.400 | 1.810 |
| Antimony | 81.76 | 4.2 | 2.3 U | 1.9 U |
| Arsenic | 3.815 | 11.3 | 17.5 | 6.2 |
| Barium | 14,308 | 775 | 3,300 | 126 |
| Beryllium | 408.8 | 0.32 | 0.36 | 0.25 |
| Cadmium | 102.2 | 13.2 | 12.4 | 1.7 |
| Chromium | 613.2 | 16.9 | 99.0 | 7.3 |
| Cobalt | 4,100 | 234 J | 35.9 | 12.4 |
| Copper | 8,176 | 101 | 267 | 60.2 |
| Lead | 750 | 533 | 648 | 72.6 |
| Manganese | 4,088 | 247 | 574 | 67.6 |
| Mercury | 62 | 2.5 | 2.6 J | 0.20 J |
| Nickel | 4,088 | 51.1 | 2,990 J | 136 J |
| Selenium | 1,022 | 0.71 U | 1.2 J | 0.93 J |
| Silver | 1,022 | 0.61 | 1.7 | 0.21 |
| Thallium | 14.31 | 2.5 | 4.7 | 0.63 U |
| Vanadium | 1,430.8 | 85.5 | 17.9 | 9.5 |
| Zinc | 61,000 | 1,340 J | 2,430 | 704 |



TABLE 2 (Continued)

SUMMARY OF ANALYTICAL RESULTS FOR METALS
SAUGET SITES H AND I
SAUGET, ST. CLAIR COUNTY, ILLINOIS

Notes:

All results are in milligrams per kilogram.

Bolded, italicized, shaded results exceed screening levels.

J = The analyte was positively identified. The associated numerical value is an approximate concentration of the analyte in the sample.
R = The result is rejected because it is unusable. The compound may or may not be present.
U = The analyte was analyzed for but was not detected above the reported sample quantitation limit.
UJ = The analyte was not detected above the reported sample quantitation limit; however, the reported quantitation limit is approximate.



TABLE 3
SUMMARY OF ANALYTICAL RESULTS FOR SVOCs
SAUGET SITES H AND I
SAUGET, ST. CLAIR COUNTY, ILLINOIS

| Analytical Parameter | Screening Level | Sample No. | | | | | | | | | |
|-----------------------------|-----------------|------------|----------|----------|----------|----------|----------|----------|--------------|----------|----------|
| | | WS-01-01 | WS-01-02 | WS-01-03 | WS-01-04 | WS-01-05 | WS-01-06 | WS-01-07 | WS-01-08 | WS-01-09 | WS-01-10 |
| Phenol | 61,320 | 4.8 J | 1.2 J | 50 U | 15 J | 5 U | 300 U | 50 U | 99 U | 25 U | 99 U |
| 2-Chlorophenol | 1,022 | 74 U | 9.9 U | 50 U | 200 U | 5 U | 300 U | 50 U | 9.9 U | 25 U | 99 U |
| Nitroso-d-n-propylamine | 8,176 | 7.4 U | 9.9 U | 50 U | 200 U | 5 U | 300 U | 50 U | 9.9 U | 25 U | 99 U |
| Nitrobenzene | 102.2 | 52 J | 10 | 50 U | 200 U | 5 U | 300 U | 50 U | 51 J | 25 U | 99 U |
| 2,4-Dichlorophenol | 613.2 | 59 J | 3.3 J | 50 U | 200 U | 5 U | 300 U | 3.2 J | 7.2 J | 25 U | 99 U |
| Naphthalene | 4,088 | 7.4 U | 1.4 J | 110 | 3,400 | 5 U | 300 U | 24 J | 660 | 7.8 J | 8.2 J |
| 4-Chloroaniline | 817.6 | 920 | 96 | 160 | 200 U | 5 U | 100 J | 290 | 350 | 23 J | 99 U |
| 2-Methyl naphthalene | 4,088 | 7.4 U | 9.9 U | 50 U | 640 | 5 U | 300 U | 4.9 J | 99 U | 25 U | 99 U |
| 2,4,6-Trichlorophenol | 520,291 | 7.4 U | 1.4 J | 50 U | 200 U | 5 U | 300 U | 50 U | 7.9 J | 25 U | 99 U |
| 1,1'-Biphenyl | 350 | 78 | 3.8 J | 50 U | 200 U | 5 U | 300 U | 50 U | 44 J | 25 U | 99 U |
| Dimethylphthalate | 2,044,000 | 74 U | 9.9 U | 50 U | 200 U | 5 U | 300 U | 50 U | 99 U | 25 U | 99 U |
| Acenaphthalene | 23,264 | 74 U | 9.9 U | 50 U | 200 U | 5 U | 300 U | 50 U | 99 U | 25 U | 99 U |
| 2,4-Dinitrotoluene | 408.8 | 74 U | 9.9 U | 50 U | 200 U | 5 U | 300 U | 50 U | 99 U | 25 U | 99 U |
| Hexachlorobenzene | 3,577 | 74 U | 1.2 J | 50 U | 200 U | 5 U | 300 U | 50 U | 99 U | 25 U | 99 U |
| Pentachlorophenol | 47.69 | 49 J | 0.86 J | 72 J | 12 J | 12 U | 41 J | 12 J | 1,400 | 62 J | 12 J |
| Phenanthrene | 61,000 | 15 J | 1.5 J | 50 U | 200 U | 0.4 U | 300 U | 62 | 99 U | 25 U | 46 J |
| Pyrene | 6,132 | 74 U | 1.6 J | 50 U | 200 U | 5 U | 300 U | 38 J | 99 U | 25 U | 31 J |
| bis(2-Ethylhexyl) phthalate | 408.8 | 74 U | 30 | 50 U | 15 J | 5 U | 300 U | 7.2 J | 99 U | 25 U | 99 U |

TABLE 3 (Continued)

**SUMMARY OF ANALYTICAL RESULTS FOR SVOCs
SAUGET SITES H AND I
SAUGET, ST. CLAIR COUNTY, ILLINOIS**

| Analytical Parameter | Screening Level | Sample No. | | | | | | | | |
|-----------------------------|-----------------|------------|----------|----------|------------|------------------|------------|------------|------------|------------|
| | | WS-02-01 | WS-03-01 | WS-03-02 | H/WS-01-01 | H/WS-01-02 | H/WS-01-03 | H/WS-01-04 | H/WS-01-05 | H/WS-02-06 |
| Phenol | 61,320 | 9.9 U | 300 U | 25 U | 99 U | 99 U | 300 U | 34 J | 8.3 J | 20 J |
| 2-Chlorophenol | 1,022 | 9.9 U | 16 J | 99 U | 99 U | 99 U | 300 U | 99 U | 9.4 J | 40 U |
| Nitroso-di-n-propylamine | 8,176 | 9.9 U | 300 U | 99 U | 99 U | 99 U | 300 U | 99 U | 9.9 U | 40 U |
| Nitrobenzene | 102.2 | 9.9 U | 300 U | 99 U | 99 U | 99 U | 300 U | 99 U | 9.9 U | 40 U |
| 2,4-Dichlorophenol | 613.2 | 1.1 J | 300 U | 99 U | 99 U | 14 J | 300 U | 16 J | 160 | 11 J |
| Naphthalene | 4,088 | 9.9 U | 300 U | 1.8 J | 99 U | 99 U | 300 U | 12 J | 9.9 U | 200 |
| 4-Chloroaniline | 817.6 | 3.2 J | 80 J | 5.1 J | 23 J | 99 U | 300 U | 99 U | 9.9 U | 16 J |
| 2-Methyl naphthalene | 4,088 | 9.9 U | 300 U | 25 U | 99 U | 99 U | 300 U | 99 U | 9.9 U | 15 J |
| 2,4,6-Trichlorophenol | 520.291 | 9.9 U | 300 U | 25 U | 99 U | 46 J | 300 U | 99 U | 18 | 19 J |
| 1,1'-Biphenyl | 350 | 9.9 U | 300 U | 25 U | 99 U | 99 U | 360 | 570 | 99 U | 120 |
| Dimethyl phthalate | 2,044,000 | 9.9 U | 300 U | 25 U | 99 U | 99 U | 300 U | 99 U | 9.9 U | 40 U |
| Acenaphthalene | 23,264 | 9.9 U | 300 U | 25 U | 99 U | 99 U | 300 U | 99 U | 9.9 U | 18 J |
| 2,4-Dinitrotoluene | 408.8 | 9.9 U | 300 U | 25 U | 99 U | 99 U | 300 U | 99 U | 9.9 U | 40 U |
| Hexachlorobenzene | 3,577 | 9.9 U | 300 U | 25 U | 99 U | 130 | 300 U | 99 U | 9.9 U | 40 U |
| Pentachlorophenol | 47.69 | 25 U | 27 J | 62 UJ | 250 UJ | 210,000 J | 750 UJ | 250 UJ | 3.7 J | 52 J |
| Phenanthrene | 61,000 | 9.9 U | 300 U | 3.0 J | 7.4 J | 99 U | 15 J | 15 J | 9.9 U | 88 |
| Pyrene | 6.132 | 9.9 U | 300 U | 2.4 J | 5.3 J | 99 U | 300 U | 5.5 J | 9.9 U | 19 J |
| bis(2-Ethylhexyl) phthalate | 408.8 | 9.9 U | 300 U | 1.7 J | 99 U | 99 U | 300 U | 99 U | 9.9 U | 40 U |

TABLE 3 (Continued)

**SUMMARY OF ANALYTICAL RESULTS FOR SVOCs
SAUGET SITES H AND I
SAUGET, ST. CLAIR COUNTY, ILLINOIS**

| Analytical Parameter | Screening Level | Sample No. | |
|-----------------------------|-----------------|------------|------------|
| | | H/WS-02-07 | H/WS-02-08 |
| Phenol | 61,320 | 4.1 J | 68 |
| 2-Chlorophenol | 1,022 | 25 U | 1.7 J |
| Nitroso-di-n-propylamine | 8,176 | 25 U | 25 U |
| Nitrobenzene | 102.2 | 25 U | 25 U |
| 2,4-Dichlorophenol | 613.2 | 2.9 J | 59 |
| Naphthalene | 4,088 | 48 | 160 |
| 4-Chloroaniline | 817.6 | 2.9 J | 23 J |
| 2-Methyl naphthalene | 4,088 | 3.8 J | 6.9 J |
| 2,4,6-Trichlorophenol | 520,291 | 7.9 J | 37 |
| 1,1'-Biphenyl | 350 | 100 | 210 |
| Dimethyl phthalate | 2,044,000 | 12 J | 4.1 J |
| Acenaphthalene | 23,264 | 25 U | 25 U |
| 2,4-Dinitrotoluene | 408.8 | 25 U | 25 U |
| Hexachlorobenzene | 3,577 | 1.8 J | 25 U |
| Pentachlorophenol | 47.69 | 62 U | 51 J |
| Phenanthrene | 61,000 | 8.9 J | 20 J |
| Pyrene | 6,132 | 2.2 J | 2.7 J |
| bis(2-Ethylhexyl) phthalate | 408.8 | 25 U | 25 U |



TABLE 3 (Continued)

**SUMMARY OF ANALYTICAL RESULTS FOR SVOCs
SAUGET SITES H AND I
SAUGET, ST. CLAIR COUNTY, ILLINOIS**

Notes:

All results are in milligrams per kilogram.

Bolded, italicized, shaded results exceed screening levels.

| | | |
|----|---|---|
| J | = | The analyte was positively identified. The associated numerical value is an approximate concentration of the analyte in the sample. |
| R | = | The result is rejected because it is unusable. The compound may or may not be present. |
| U | = | The analyte was analyzed for but was not detected above the reported sample quantitation limit. |
| UJ | = | The analyte was not detected above the reported sample quantitation limit; however, the reported quantitation limit is approximate. |



TABLE 4

**SUMMARY OF ANALYTICAL RESULTS FOR VOLATILE ORGANIC COMPOUNDS (VOC),
PESTICIDES, AND POLYCHLORINATED BIPHENYLS (PCB)
SAUGET SITES H AND I
SAUGET, ST. CLAIR COUNTY, ILLINOIS**

| Analytical Parameter | Screening Level | Sample No. | | | | | | | | | |
|------------------------|-----------------|------------|----------|----------|----------|----------|----------|------------|----------|----------|----------|
| | | WS-01-01 | WS-01-02 | WS-01-03 | WS-01-04 | WS-01-05 | WS-01-06 | WS-01-07 | WS-01-08 | WS-01-09 | WS-01-10 |
| Vinyl chloride | 7.948 | 25 U | 13 U | 25 U | 0.26 U | 0.44 U | 13 U | 36 | 38 U | 5 U | 26 J |
| cis-1,2-Dichloroethene | 2.044 | 25 U | 13 U | 25 U | 25 U | 2.1 | 1.5 U | 160 | 38 U | 1.3 U | 140 J |
| Trichloroethene | 14.308 | 3.9 J | 13 U | 25 U | 4 J | 7.5 | 2.7 J | 27 | 5.6 J | 0.18 J | 250 U |
| Benzene | 104.058 | 35 | 13 U | 12 J | 25 U | 1.3 U | 13 U | 110 | 14 J | 0.59 J | 96 J |
| Ethylbenzene | 2,0440 | 100 | 13 U | 66 | 17 J | 0.16 J | 13 U | 12 J | 16 J | 3.1 | 250 U |
| Toluene | 40.880 | 110 | 2 J | 59 | 25 U | 0.14 J | 13 U | 260 | 47 | 3.3 | 290 |
| Xylenes (total) | 40,880 | 280 | 13 U | 250 | 390 | 0.49 J | 13 U | 34 | 62 | 12 | 35 J |
| Tetrachloroethene | 110.06 | 6.8 J | 13 U | 4.6 J | 25 U | 0.36 J | 13 U | 120 | 12 J | 0.22 J | 85 J |
| Chlorobenzene | 4.088 | 110 | 31 | 180 | 25 U | 0.020 J | 13 U | 1,100 | 190 | 8.1 | 1,500 |
| 1,3-Dichlorobenzene | 6,132 | 25 U | 13 U | 25 U | 25 U | 1.3 | 13 U | 25 U | 3.8 U | 1.3 U | 250 U |
| 1,4-Dichlorobenzene | 238.467 | 30 | 3 J | 11 J | 25 U | 1.4 | 13 U | 30 | 12 J | 3.4 | 68 J |
| 1,2-Dichlorobenzene | 18.396 | 14 J | 3.1 J | 4.7 J | 2.5 U | 1.2 J | 13 U | 24 J | 4.5 J | 1.9 | 45 J |
| 1,2,4-Trichlorobenzene | 2,044 | 96 | 6.8 J | 19 J | 25 U | 1.2 J | 1.7 J | 25 U | 3.8 U | 40 | 250 U |
| 4,4'-DDE | 16.83 | 0.099 R | 0.099 U | 0.099 UJ | 0.099 U | 0.099 U | 0.099 U | 0.19 J | 0.099 R | 0.099 U | 0.22 J |
| 4,4'-DDD | 23.85 | 0.099 R | 0.24 J | 0.099 UJ | 0.099 U | 0.099 U | 0.099 U | 0.36 J | 0.099 R | 0.05 U | 0.13 J |
| 4,4'-DDT | 16.83 | 0.099 R | 0.70 J | 0.099 UJ | 0.099 U | 0.099 U | 0.099 U | 0.42 J | 0.099 R | 0.5 U | 0.98 J |
| Endrin ketone | 61 | 0.34 J | 0.28 J | 0.17 J | 0.30 | 0.099 U | 0.099 U | 0.099 U | 1.2 J | 0.5 U | 0.099 U |
| Aroclor - 1242 | 2.862 | 11 J | 2.6 J | 13 J | 0.099 U | 0.099 U | 0.099 U | 0.099 U | 71 J | 26 J | 0.099 U |
| Aroclor - 1254 | 2.862 | 29 J | 9.5 J | 40 J | 0.099 U | 0.099 U | 0.099 U | 0.099 U | 200 J | 60 J | 0.099 U |
| Aroclor - 1260 | 2.862 | 34 J | 3.3 J | 17 J | 6.4 J | 0.099 U | 0.099 U | 0.099 U | 67 J | 5 U | 0.099 U |

TABLE 4 (Continued)

SUMMARY OF ANALYTICAL RESULTS FOR VOLATILE ORGANIC COMPOUNDS (VOC),
PESTICIDES, AND POLYCHLORINATED BIPHENYLS (PCB)
SAUGET SITES H AND I
SAUGET, ST. CLAIR COUNTY, ILLINOIS

| Analytical Parameter | Screening Level | Sample No. | | | | | | | | |
|------------------------|-----------------|------------|----------|------------|------------|------------|------------|------------|------------|------------|
| | | WS-02-01 | WS-03-01 | WS-03-02 | H/WS-01-01 | H/WS-01-02 | H/WS-01-03 | H/WS-01-04 | H/WS-01-05 | H/WS-02-06 |
| Vinyl chloride | 7.948 | 25 U | 13 U | 5 U | 50 U | 5 U | 25 U | 25 U | 2.5 U | 50 U |
| cis-1,2-Dichloroethene | 2,044 | 25 U | 13 U | 5 U | 50 U | 5 U | 25 U | 25 U | 2.5 U | 50 U |
| Trichloroethene | 14.308 | 25 U | 13 U | 5 U | 50 U | 5 U | 25 U | 25 U | 2.5 U | 12 U |
| Benzene | 104.058 | 3.4 J | 5.2 J | 1.7 J | 97 | 63 | 320 | 120 | 0.43 J | 180 |
| Ethylbenzene | 2,0440 | 25 U | 13 U | 0.59 J | 50 U | 0.74 J | 70 | 15 J | 2.5 U | 12 J |
| Toluene | 40.880 | 25 U | 13 U | 5 U | 50 U | 0.80 J | 130 U | 6.4 J | 2.5 U | 86 |
| Xylene's (total) | 40,880 | 25 U | 13 U | 5 U | 50 U | 5 U | 13 J | 4.3 J | 50 U | 50 U |
| Tetrachloroethene | 110.06 | 25 U | 13 U | 5 U | 50 U | 5 U | 25 U | 25 U | 2.5 U | 12 J |
| Chlorobenzene | 4,088 | 3.9 J | 100 | 63 J | 580 | 13 | 720 | 500 | 2.6 | 570 |
| 1,3-Dichlorobenzene | 6,132 | 2.5 U | 4.8 J | 4.4 J | 16 J | 0.80 J | 47 | 21 J | 0.77 J | 25 J |
| 1,4-Dichlorobenzene | 238.467 | 6.3 J | 30 | 33 | 92 | 10 | 330 | 270 | 3.4 | 350 |
| 1,2-Dichlorobenzene | 18.396 | 25 U | 2.1 J | 2.2 J | 12 J | 1.5 J | 9.7 J | 37 | 0.47 J | 37 J |
| 1,2,4-Trichlorobenzene | 2,044 | 25 U | 13 U | 5 U | 50 U | 5 U | 130 U | 200 | 2.7 U | 100 |
| 4,4'-DDE | 16.83 | 0.099 U | 0.099 U | 1.7 J | 0.99 U | 9.9 U | 9.9 U | 8.2 | 0.99 U | 0.99U |
| 4,4'-DDD | 23.85 | 12 U | 3.2 J | 12 J | 0.99 U | 9.9 U | 9.9 U | 27 J | 0.99 U | 31 |
| 4,4'-DDT | 16.83 | 0.099 U | 35 J | 86 J | 0.99 U | 9.9 U | 81 J | 25 J | 1.7 J | 0.99 U |
| Endrin ketone | 61 | 0.099 U | 1.2 J | 3.5 J | 0.98 J | 9.9 U | 9.9 U | 0.56 J | 0.05 J | 0.99 U |
| Aroclor - 1242 | 2.862 | 0.099 U | 9.9 U | 46 | 9.9 U | 99 U | 4,000 J | 30 | 0.99 U | 35 |
| Aroclor - 1254 | 2.862 | 0.099 U | 0.099 U | 130 | 110 J | 99 U | 99 U | 43 J | 6.9 J | 87 J |
| Aroclor - 1260 | 2.862 | 0.099 U | 110 J | 330 J | 95 J | 99 U | 1,000 J | 68 | 4.7 J | 63 J |



TABLE 4 (Continued)

**SUMMARY OF ANALYTICAL RESULTS FOR VOLATILE ORGANIC COMPOUNDS (VOC),
PESTICIDES, AND POLYCHLORINATED BIPHENYLS (PCB)
SAUGET SITES H AND I
SAUGET, ST. CLAIR COUNTY, ILLINOIS**

| Analytical Parameter | Screening Level | Sample No. | |
|------------------------|-----------------|--------------|------------|
| | | H/WS-02-07 | H/WS-02-08 |
| Vinyl chloride | 7.948 | 250 U | 130 U |
| cis-1,2-Dichloroethene | 2,044 | 250 U | 130 U |
| Trichloroethene | 14.308 | 250 U | 130 U |
| Benzene | 104.058 | 120 J | 520 |
| Ethy benzene | 2,0440 | 250 U | 13 |
| Toluene | 40,880 | 110 J | 460 |
| Xylene's (total) | 40,880 | 250 U | 130 U |
| Tetrachloroethene | 110.06 | 250 U | 57 |
| Chlorobenzene | 4,088 | 630 | 1,600 |
| 1,3-Dichlorobenzene | 6.132 | 27 J | 26 J |
| 1,4-Dichlorobenzene | 238.467 | 2,000 | 330 |
| 1,2-Dichlorobenzene | 18,396 | 370 | 1,300 |
| 1,2,4-Trichlorobenzene | 2,044 | 320 | 4,400 |
| 4,4'-DDE | 16.83 | 0.99 U | 3.1 J |
| 4,4'-DDD | 23.85 | 6.7 J | 26 J |
| 4,4'-DDT | 16.83 | 0.99 U | 0.5 U |
| Endrin ketone | 61 | 14 J | 0.5 U |
| Aroclor - 1242 | 2.862 | 980 J | 5 U |
| Aroclor - 1254 | 2.862 | 750 J | 41 J |
| Aroclor - 1260 | 2.862 | 1,400 J | 18 J |

TABLE 4 (Continued)

**SUMMARY OF ANALYTICAL RESULTS FOR VOLATILE ORGANIC COMPOUNDS (VOC),
PESTICIDES, AND POLYCHLORINATED BIPHENYLS (PCB)
SAUGET SITES H AND I
SAUGET, ST. CLAIR COUNTY, ILLINOIS**

All results are in milligrams per kilogram.

Bolded, italicized, shaded results exceed screening levels.

J = The analyte was positively identified. The associated numerical value is an approximate concentration of the analyte in the sample.
R = The result is rejected because it is unusable. The compound may or may not be present.
U = The analyte was analyzed for but was not detected above the reported sample quantitation limit.
UJ = The analyte was not detected above the reported sample quantitation limit; however, the reported quantitation limit is approximate.



Sample analytical results and the types of waste materials found during investigative activities at Sites I and H are discussed below.

Site I

Samples collected from trench 1 had sample analytical results that exceeded screening levels for metals, SVOCs, and VOCs. The screening level for barium was exceeded in samples WS-01-01, WS-01-07, and WS-01, which had concentrations of 62,000; 49,200; and 58,800 parts per million (ppm), respectively. Arsenic concentrations exceeded the screening level in samples WS-01-03 and WS-01-08, which had concentrations of 14.7 and 11.8 ppm, respectively. Lead concentrations exceeded the screening level in sample WS-01-08 which had a concentration of 896 ppm. The concentration of 4-chloroaniline in sample WS-01-01 of 920 ppm also exceeded the screening level, and pentachlorophenol exceeded its screening level in sample WS-01-08, which had a concentration of 1,400 ppm. Screening levels were exceeded for vinyl chloride, trichloroethene, benzene, and tetrachloroethene in sample WS-01-07, which contained 36, 27, 110, and 120 ppm of these analytes respectively.

Samples collected from trench 2 had sample analytical results that exceeded screening levels for metals. The screening level for barium was exceeded in sample WS-02-01, which contained 70,700 ppm. Sample WS-02-02 contained chromium at 1,330 ppm, which also exceeded the screening level.

Trench 3 had sample analytical results that exceeded screening levels for metals and PCBs. The screening level for copper was exceeded in sample WS-03-01, which contained 9,600 ppm. The arsenic concentration in sample WS-03-02 exceeded the screening level at a concentration of 4.1 ppm, and the lead in sample WS-03-02 exceeded the screening level at a concentration of 1,960 ppm. Screening levels were exceeded for the PCB compounds Aroclor - 1242 and Aroclor - 1254 in sample WS-03-02 at concentrations of 46 and 130 ppm, respectively.

During excavation activities at Site I, various types of fill material and solid wastes were encountered, including filter cake, filter cloth, filter paper, crystalline material, sludge and tar-like material, granular beads, cement, and pumice-like material.

Site H

Samples collected from trench 1 had sample analytical results that exceeded screening levels for metals, SVOCs, VOCs, and PCBs. Screening levels were exceeded for barium in samples H/WS-01-01 and H/WS-01-04 at concentrations of 102,000 and 133,000 ppm, respectively. The arsenic concentration in sample H/WS-01-03 exceeded the screening at 26.6 ppm. Screening levels were exceeded for hexachlorobenzene in sample H/WS-01-02 at a concentration of 130 ppm; petrachlorophenol in sample H/WS-01-02 at a concentration of 210,000 ppm; and 1,1-biphenyl in samples H/WS-01-03 and H/WS-01-04 at concentrations of 360 and 570 ppm, respectively. The screening level was exceeded for benzene in samples H/WS-01-03 and H/WS-01-04 at concentrations of 320 and 120 ppm, respectively. Screening levels were exceeded for the PCB compounds Aroclor - 1242 and Aroclor - 1260 in sample H/WS-01-04 at concentrations of 30 and 68 ppm, respectively.

Samples collected from trench 2 had sample analytical results that exceeded screening levels for metals, VOCs, and PCBs. The screening level for arsenic was exceeded in samples H/WS-02-06, H/WS-02-07, and H/WS-02-08, which contained 11.3, 17.5, and 6.2 ppm, respectively. The screening level for 4,4'-DDD was exceeded in sample H/WS-02-06, which contained a 31 ppm. The benzene screening level was exceeded in samples H/WS-02-06 and H/WS-02-08 at concentrations of 180 and 520 ppm, respectively. The 1,4-dichlorobenzene concentrations in samples H/WS-02-06, H/WS-02-07, and H/WS-02-08 exceeded the screening level at 350; 2,000; and 330 ppm, respectively. The screening level for the PCB compound Aroclor-1242 was exceeded in sample H/WS-02-06 at a concentration of 35 ppm.



During excavation activities at Site H, various types of fill material and solid wastes were encountered, including filter paper, crystalline material, catalyst beads, sand-like material, and various soils.

5.0 SITE ACTIVITIES

The U.S. EPA tasked START to oversee test trench excavation and sampling activities at Sauget Sites H and I. START conducted site activities from July 12 through 16, 2002, during which time a total six test trenches were excavated using a tracked excavator. START collected a total of 22 grab samples from five test trenches for delivery to U.S. EPA-approved CLP laboratories for testing.

A total of 14 samples were collected from three trenches at Site I. Analytical results indicate that metals concentrations exceeded screening levels in nine samples, SVOC concentrations exceeded screening levels in two samples, VOC concentrations exceeded screening levels in one sample, and PCB concentrations exceeded screening levels in one sample. Materials noted during trench excavation activities at Site I include filter cake, filter cloth, filter paper, crystalline material, sludge and tar-like material, granular beads, cement, and pumice-like material.

A total of eight samples were collected from two trenches at Site H. Analytical results indicate that metals concentrations exceeded screening levels in six samples, SVOC concentrations exceeded screening levels in three samples, VOC concentrations exceeded screening levels in five samples, and PCB concentrations exceeded screening levels in two samples. Materials noted during trench excavation activities at Site H include filter paper, crystalline material, catalyst beads, sand-like material, and various soils.

After completion of all site excavation and sampling activities, site restoration activities were conducted. Test trenches were restored by replacing the excavated soil back in the respective trenches, grading surface soil, and applying a seed Fescue mixture and straw on the surface.

At this time, START does not anticipate further activities under this TDD.

References

United States Environmental Protection Agency (U.S. EPA). 2000a. "Preliminary Remediation Goals Table." Region IX Website. Accessed on October 1. On-line Address: www.epa.gov/region09/waste_sfund/prg_files/02table.pdf

U.S. EPA. "Risk-Based Concentration Tables." 2000b. Region III Website. Accessed on October 9. On-line Address: www.epa.gov/reg3hwmd/risk/rbc/002.pdf

APPENDIX A
PHOTOGRAPHIC LOG
(19 Pages)



Photograph No.: 1
TDD Number: S05-0204-020
Location: Sauget Site I
Subject: Start of trench 1 excavation

Orientation: South
Date: 13 July 02



Photograph No.: 2
TDD Number: S05-0204-020
Location: Sauget Site I
Subject: Crystalline material encountered in trench 1 at 6 feet.

Orientation: West
Date: 13 July 02



Photograph No.: 3

Orientation: South

TDD Number: S05-0204-020

Date: 13 July 02

Location: Sauget Site I

Subject: Suspected paper-like material encountered in trench 1



Photograph No.: 4
TDD Number: S05-0204-020
Location: Sauget Site I
Subject: Typical of spoil from trench 1

Orientation: East
Date: 13 July 02



Photograph No.: 5
TDD Number: S05-0204-020
Location: Sauget Site I
Subject: Remnant of drum carcass in trench 1

Orientation: South
Date: 13 July 02



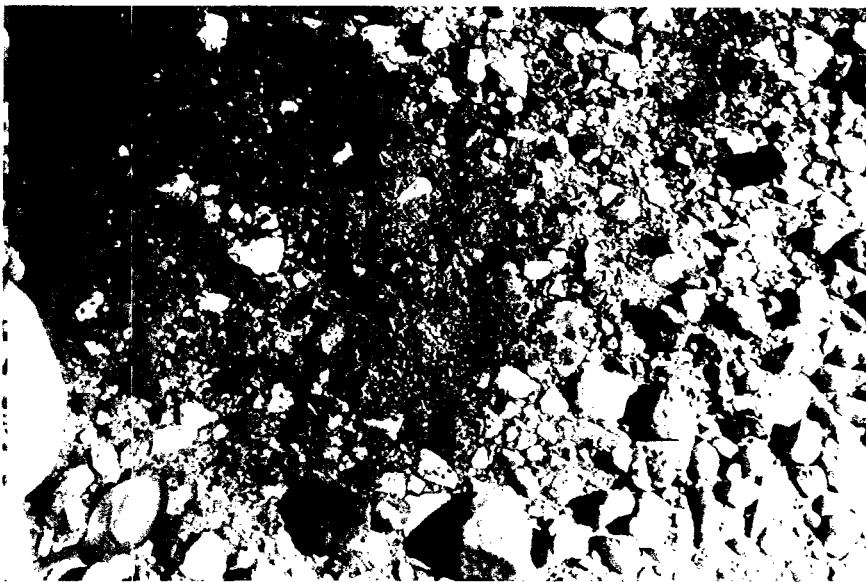
Photograph No.: 6
TDD Number: S05-0204-020
Location: Sauget Site I
Subject: Sampling trench 1

Orientation: South
Date: 13 July 02



Photograph No.: 7
TDD Number: S05-0204-020
Location: Sauget Site I
Subject: Solid material found in trench 1 with purple coloration

Orientation: South
Date: 13 July 02



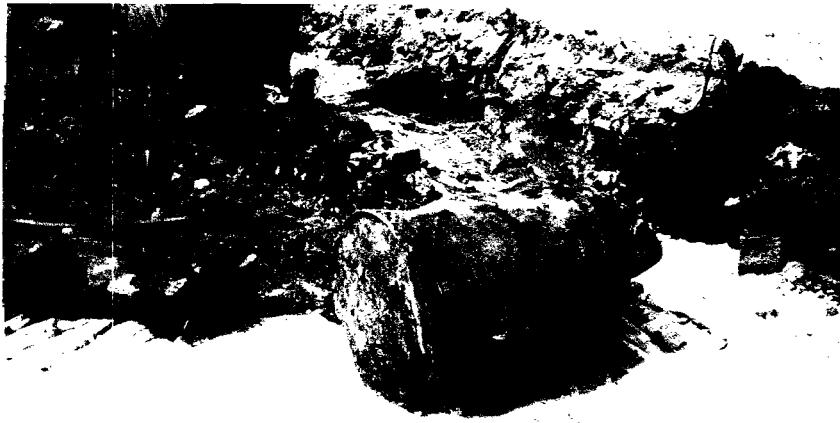
Photograph No.: 8
TDD Number: S05-0204-020
Location: Sauget Site I
Subject: Yellow crystalline rock found in trench 1

Orientation: South
Date: 13 July 02



Photograph No.: 9
TDD Number: S05-0204-020
Location: Sauget Site I
Subject: Excavation of trench 2

Orientation: Southeast
Date: 14 July 02



Photograph No.: 10
TDD Number: S05-0204-020
Location: Sauget Site I
Subject: Intact drum containing a hard, concrete-like substance uncovered at 5 feet below ground surface in trench 2
Orientation: Northeast
Date: 14 July 02



Photograph No.: 11
TDD Number: S05-0204-020
Location: Sauget Site I
Subject: Material inside of drum
Orientation: Northeast
Date: 14 July 02



Tetra Tech EM Inc.



Photograph No.: 12
TDD Number: S05-0204-020
Location: Sauget Site I
Subject: Backfill of trench 2 complete

Orientation: Southwest
Date: 14 July 02



Photograph No.: 13
TDD Number: S05-0204-020
Location: Sauget Site I
Subject: Excavation of trench 3

Orientation: Southwest
Date: 14 July 02



Photograph No.: 14
TDD Number: S05-0204-020
Location: Sauget Site I
Subject: Sample 1 from trench 3

Orientation: Northeast
Date: 14 July 02



Photograph No.: 15
TDD Number: S05-0204-020
Location: Sauget Site I
Subject: Sample 2 from trench 3

Orientation: Northeast
Date: 14 July 02



Photograph No.: 16
TDD Number: S05-0204-020
Location: Sauget Site I
Subject: View of trench 4

Orientation: Southwest
Date: 14 July 02



Photograph No.: 17
TDD Number: S05-0204-020
Location: Sauget Site I
Subject: Spoil from trench 4

Orientation: East
Date: 14 July 02



Photograph No.: 18
TDD Number: S05-0204-020
Location: Sauget Site H
Subject: View of trench 1 Site H

Orientation: South
Date: 15 July 02



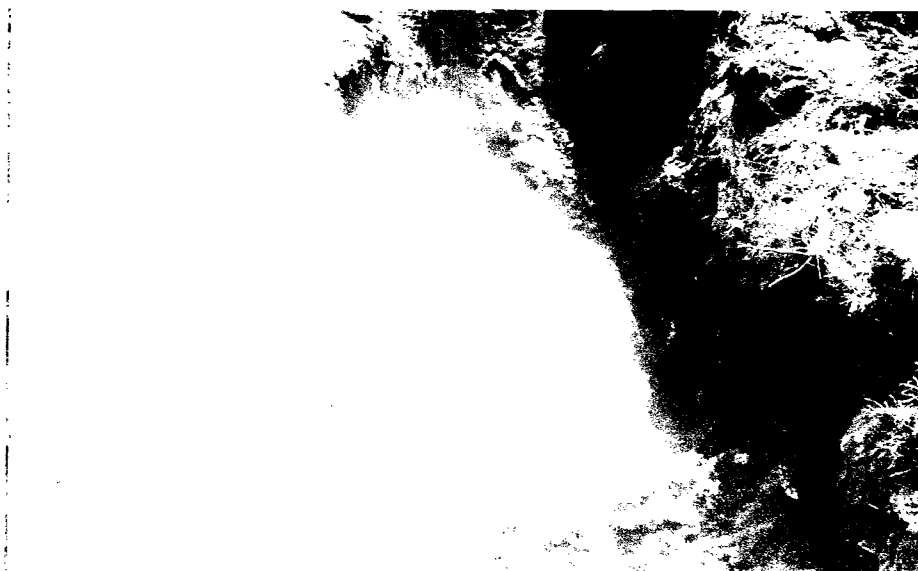
Photograph No.: 19
TDD Number: S05-0204-020
Location: Sauget Site H
Subject: Trench 1 at 4 feet below ground surface

Orientation: Southeast
Date: 15 July 02



Photograph No.: 20
TDD Number: S05-0204-020
Location: Sauget Site H
Subject: Trench 1 at 5 feet below ground surface showing filter paper, ash, and white crystalline material

Orientation: South
Date: 15 July 02



Photograph No.: 21
TDD Number: S05-0204-020
Location: Sauget Site H
Subject: Trench 1 showing trench material going below ground water

Orientation: Southeast
Date: 15 July 02



Photograph No.: 22

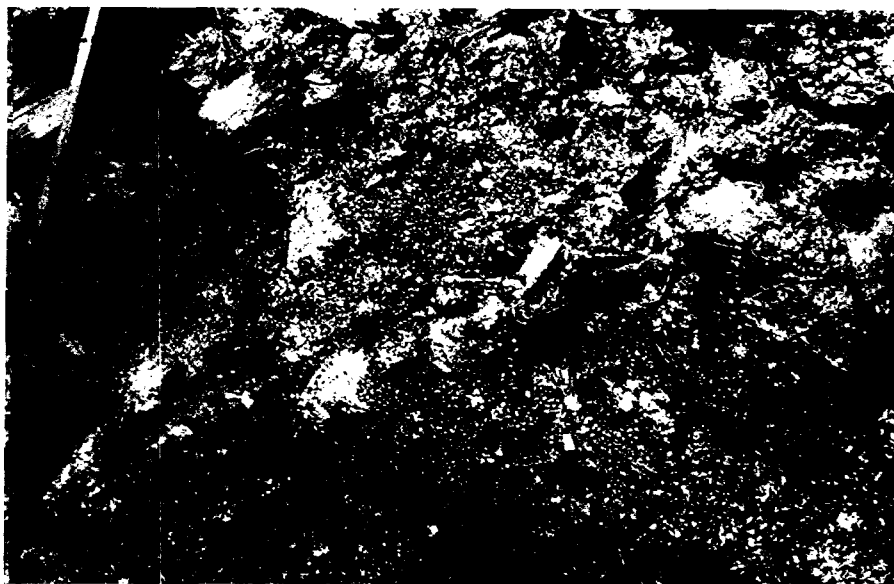
Orientation: Southeast

TDD Number: S05-0204-020

Date: 15 July 02

Location: Sauget Site H

Subject: Trench 1 showing an oily coated sludge-like material



Photograph No.: 23

Orientation: Southeast

TDD Number: S05-0204-020

Date: 15 July 02

Location: Sauget Site H

Subject: Trench 1 showing catalyst beads



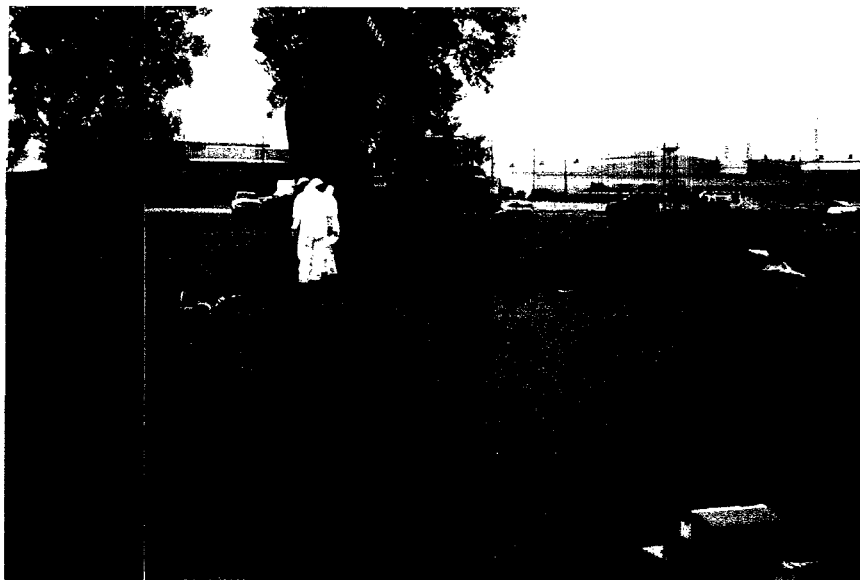
Photograph No.: 24
TDD Number: S05-0204-020
Location: Sauget Site H
Subject: Trench 1 showing documents belonging to Monsanto

Orientation: South
Date: 15 July 02



Photograph No.: 25
TDD Number: S05-0204-020
Location: Sauget Site H
Subject: Backfilling of trench 1

Orientation: Northeast
Date: 15 July 02



Photograph No.: 26
TDD Number: S05-0204-020
Location: Sauget Site H
Subject: Excavation of trench 2

Orientation: Northwest
Date: 15 July 02



Photograph No.: 27
TDD Number: S05-0204-020
Location: Sauget Site H
Subject: Sampling of trench 2

Orientation: Northwest
Date: 15 July 02



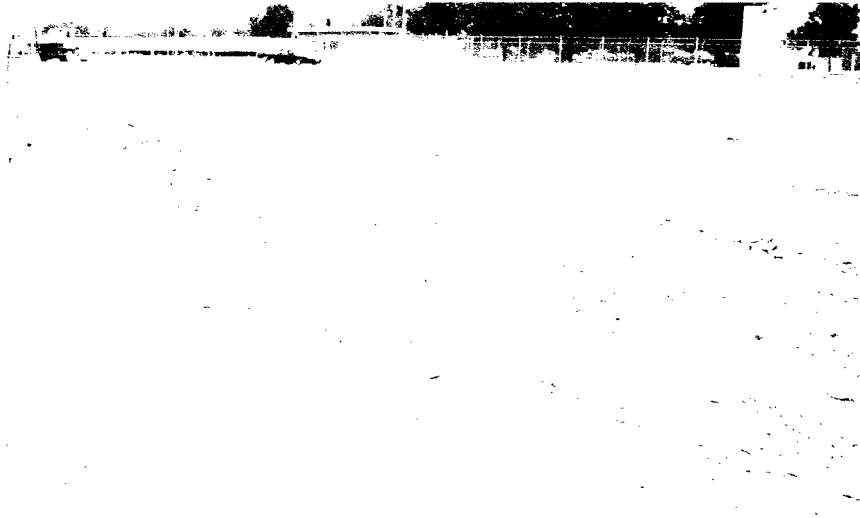
Photograph No.: 28
TDD Number: S05-0204-020
Location: Sauget Site H
Subject: Backfilling of trench 2

Orientation: Northwest
Date: 15 July 02



Photograph No.: 29
TDD Number: S05-0204-020
Location: Sauget Site I
Subject: Trench 1 restoration complete

Orientation: Southwest
Date: 16 July 02



Photograph No.: 30
TDD Number: S05-0204-020
Location: Sauget Site I
Subject: Trench 2 restoration complete

Orientation: Northeast
Date: 16 July 02

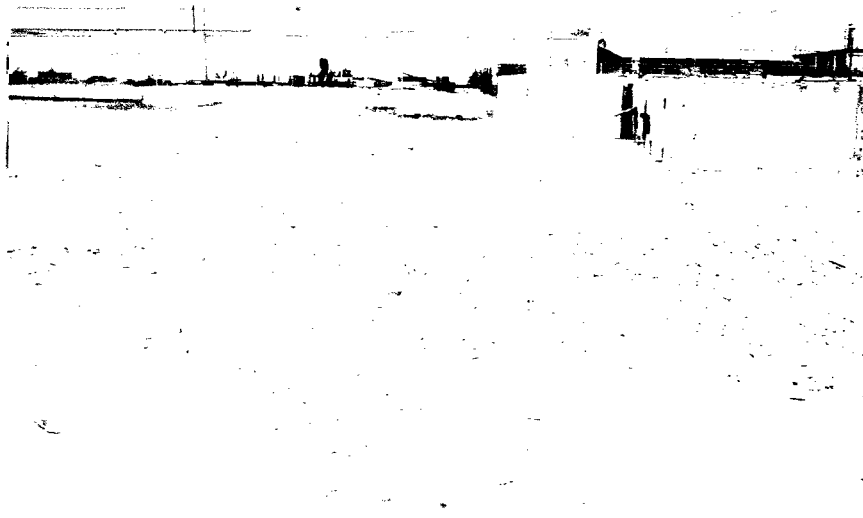


Photograph No.: 31
TDD Number: S05-0204-020
Location: Sauget Site I
Subject: Trench 3 restoration complete

Orientation: West
Date: 16 July 02



Tetra Tech EM Inc.



Photograph No.: 32
TDD Number: S05-0204-020
Location: Sauget Site I
Subject: Trench 4 restoration complete

Orientation: West
Date: 16 July 02



Photograph No.: 33
TDD Number: S05-0204-020
Location: Sauget Site H
Subject: Trench 1 restoration complete

Orientation: West
Date: 16 July 02



Photograph No.: 34
TDD Number: S05-0204-020
Location: Sauget Site H
Subject: Trench 2 restoration complete

Orientation: South
Date: 16 July 02



Photograph No.: 35
TDD Number: S05-0204-020
Location: Sauget Site H
Subject: Trench 1 and 2 restoration complete

Orientation: South
Date: 16 July 02



Photograph No.: 36

TDD Number: S05-0204-020

Location: Sauget Site I

Subject: View of Site I after restoration was complete

Orientation: North

Date: 16 July 02

APPENDIX B
SHIPMENT AND CHAIN-OF-CUSTODY RECORDS

(Nine Sheets)



USEPA Contract Laboratory Program Inorganic Traffic Report & Chain of Custody Record

Case No: 30721

DAS No:

SDG No:

ME21K0

L

| | | | | | |
|---|--------------------------------|---------------------|---|-------------------------|----------------------------------|
| Date Shipped: 7/15/2002 Carrier Name: FedEx Airbill: 827673148810 Shipped to: American Analytical & Technical Services, Inc. 1700 West Albany Suite C Broken Arrow OK 74012 (918) 251-0545 | Chain of Custody Record | | Sampler Signature: <i>Annie Foster</i> | For Lab Use Only | |
| | Relinquished By | (Date / Time) | Received By | (Date / Time) | Lab Contract No: <i>68W00086</i> |
| | 1 <i>Annie Foster</i> | <i>7/15/02 1930</i> | <i>Ben Taut</i> | <i>7/16/02 08:30</i> | Unit Price: <i>\$116.93</i> |
| | 2 | | | | Transfer To: |
| | 3 | | | | Lab Contract No: |
| 4 | | | | | Unit Price: |

| INORGANIC SAMPLE No. | MATRIX/ SAMPLER | CONC/ TYPE | ANALYSIS/ TURNAROUND | TAG No./ PRESERVATIVE | STATION LOCATION | SAMPLE COLLECT DATE/TIME | | ORGANIC SAMPLE No. | FOR LAB USE ONLY Sample Condition On Receipt |
|-------------------------|--|---------------|-------------------------|--------------------------|---------------------|-----------------------------|-----------------|-----------------------|---|
| ME21K0 | Soil/Sediment/ Mechelle Anderson | M/G | TM (7) | 598803 (Ice Only) (1) | WS-01-01 | S: | 7/13/2002 10:32 | E21K0 | |
| ME21K1 | Soil/Sediment/ Mechelle Anderson | M/G | TM (7) | 598806 (Ice Only) (1) | WS-01-02 | S: | 7/13/2002 10:32 | E21K1 | |
| ME21K2 | Soil/Sediment/ Mechelle Anderson | M/G | TM (7) | 598809 (Ice Only) (1) | WS-01-03 | S: | 7/13/2002 10:32 | E21K2 | |
| ME21K3 | Soil/Sediment/ Mechelle Anderson | M/G | TM (7) | 598812 (Ice Only) (1) | WS-01-04 | S: | 7/13/2002 14:20 | E21K3 | |
| ME21K4 | Soil/Sediment/ Mechelle Anderson | M/G | TM (7) | 598815 (Ice Only) (1) | WS-01-05 | S: | 7/13/2002 14:45 | E21K4 | |
| ME21K5 | Soil/Sediment/ Mechelle Anderson | M/G | TM (7) | 598818 (Ice Only) (1) | WS-01-06 | S: | 7/13/2002 15:10 | E21K5 | |
| ME21K6 | Soil/Sediment/ Mechelle Anderson | M/G | TM (7) | 598821 (Ice Only) (1) | WS-01-07 | S: | 7/13/2002 15:52 | E21K6 | |
| ME21K7 | Soil/Sediment/ Mechelle Anderson | M/G | TM (7) | 598824 (Ice Only) (1) | WS-01-08 | S: | 7/13/2002 16:15 | E21K7 | |
| ME21K8 | Soil/Sediment/ Mechelle Anderson | M/G | TM (7) | 598827 (Ice Only) (1) | WS-01-09 | S: | 7/13/2002 16:25 | E21K8 | |
| ME21K9 | Soil/Sediment/ Mechelle Anderson | M/G | TM (7) | 598830 (Ice Only) (1) | WS-02-01 | S: | 7/14/2002 10:15 | E21K9 | |

| | | | | |
|------------------------------|--|---|--|---|
| Shipment for Case Complete?N | Sample(s) to be used for laboratory QC: | Additional Sampler Signature(s): | Cooler Temperature Upon Receipt: <i>12.5°</i> | Chain of Custody Seal Number: <i>87114/87115</i> |
| Analysis Key: | Concentration: L = Low, M = Low/Medium, H = High | Type/Designate: Composite = C, Grab = G | Custody Seal Intact?__ | Shipment Iced?__ |
| TM = CLP TAL Total Metals | | | | |

TR Number: 5-343595582-071502-0001

PR provides preliminary results. Requests for preliminary results will increase analytical costs.

Send Copy to: Contract Laboratory Analytical Services Support, 2000 Edmund Halley Dr., Reston, VA. 20191-3436 Phone 703/264-9348 Fax 703/264-9222

F2V5.0.66 Page 1 of 2

LABORATORY COPY



USEPA Contract Laboratory Program Inorganic Traffic Report & Chain of Custody Record

Case No: 30721

DAS No:

SDG No:

ME21KD

L

| | | | | | | |
|--|--------------------------------|------------------------|---------------------------|----------------------|-------------------------|-----------------|
| Date Shipped: 7/15/2002 Carrier Name: FedEx Airbill: 827673148810 Shipped to: American Analytical & Technical Services, Inc. 1700 West Albany Suite C Broken Arrow OK 74012 (918) 251-0545 | Chain of Custody Record | | Sampler Signature: | | For Lab Use Only | |
| | Relinquished By | (Date / Time) | Received By | (Date / Time) | Lab Contract No: | |
| | 1 <i>Anne Pester</i> | <i>7/15/2002 19:30</i> | <i>B. T...</i> | <i>7/16/02 08:30</i> | Unit Price: | <i>\$116.93</i> |
| | 2 | | | | Transfer To: | |
| | 3 | | | | Lab Contract No: | |
| 4 | | | | Unit Price: | | |

| INORGANIC SAMPLE No. | MATRIX/ SAMPLER | CONC/ TYPE | ANALYSIS/ TURNAROUND | TAG No./ PRESERVATIVE | STATION LOCATION | SAMPLE COLLECT DATE/TIME | ORGANIC SAMPLE No. | FOR LAB USE ONLY Sample Condition On Receipt |
|-------------------------|--|---------------|-------------------------|--------------------------|---------------------|--------------------------------|-----------------------|---|
| ME21L0 | Soil/Sediment/ Mechelle Anderson | M/G | TM (7) | 598833 (Ice Only) (1) | WS-02-02 | S: 7/14/2002 10:57 | E21L0 | |
| ME21L1 | Soil/Sediment/ Mechelle Anderson | M/G | TM (7) | 598836 (Ice Only) (1) | WS-03-01 | S: 7/14/2002 14:17 | E21L1 | |
| ME21L2 | Soil/Sediment/ Mechelle Anderson | M/G | TM (7) | 598839 (Ice Only) (1) | WS-03-02 | S: 7/14/2002 14:19 | E21L2 | |
| ME21L3 | Soil/Sediment/ Mechelle Anderson | M/G | TM (7) | 598842 (Ice Only) (1) | WS-01 | S: 7/13/2002 15:52 E: 15:52 | E21L3 | |
| ME21L4 | Soil/Sediment/ Mechelle Anderson | M/G | TM (7) | 598845 (Ice Only) (1) | HWS-01-01 | S: 7/15/2002 11:15 | E21L4 | |
| ME21L5 | Soil/Sediment/ Mechelle Anderson | M/G | TM (7) | 598848 (Ice Only) (1) | HWS-01-02 | S: 7/15/2002 11:20 | E21L5 | |
| ME21L6 | Soil/Sediment/ Mechelle Anderson | M/G | TM (7) | 598851 (Ice Only) (1) | HWS-01-03 | S: 7/15/2002 11:52 | E21L6 | |

255

| | | | | |
|---|---|---|---|---|
| Shipment for Case Complete? <input checked="" type="checkbox"/> | Sample(s) to be used for laboratory QC: | Additional Sampler Signature(s): | Cooler Temperature Upon Receipt: <i>125°</i> | Chain of Custody Seal Number: <i>87114/87115</i> |
| Concentration: L = Low, M = Low/Medium, H = High | | Type/Designate: Composite = C, Grab = G | | Custody Seal Intact? <input checked="" type="checkbox"/> Shipment Iced? <input checked="" type="checkbox"/> |

Metals

5582-071502-0001

for preliminary results will increase analytical costs.

Services Support, 2000 Edmund Halley Dr., Reston, VA. 20191-3436 Phone 703/264-9348 Fax 703/264-9222

LABORATORY COPY

F2V5.0.66 Page 2 of 2



USEPA Contract Laboratory Program
Inorganic Traffic Report & Chain of Custody Record

| | |
|-------------------------|----------|
| Case No: | 30721 |
| DAS No: | |
| SDG No: | ME21K0 |
| For Lab Use Only | |
| Lab Contract No: | 68W00086 |
| Unit Price: | \$116.93 |
| Transfer To: | |
| Lab Contract No: | |
| Unit Price: | |

| | | | |
|---|--------------------------------|----------------|---|
| Date Shipped: 7/16/2002 Carrier Name: FedEx Airbill: 827673148913 Shipped to: American Analytical & Technical Services, Inc. 1700 West Albany Suite C Broken Arrow OK 74012 (918) 251-0545 | Chain of Custody Record | | Sampler Signature: <i>Annie Perkins</i> |
| | Relinquished By | (Date / Time) | Received By (Date / Time) |
| | 1 <i>Annie Perkins</i> | 7/16/2002 1300 | B. T. T. 7/17/02 09:15 |
| | 2 | | |
| | 3 | | |
| 4 | | | |

| INORGANIC SAMPLE No. | MATRIX/ SAMPLER | CONC/ TYPE | ANALYSIS/ TURNAROUND | TAG No./ PRESERVATIVE | STATION LOCATION | SAMPLE COLLECT DATE/TIME | | ORGANIC SAMPLE No. | FOR LAB USE ONLY Sample Condition On Receipt |
|-------------------------|--|---------------|-------------------------|--------------------------|---------------------|-----------------------------|-----------------|-----------------------|---|
| ME21L7 | Soil/Sediment/ Mechelle Anderson | M/G | TM (7) | 598854 (Ice Only) (1) | H/WS-01-04 | S: | 7/15/2002 14:10 | E21L7 | OK |
| ME21L8 | Soil/Sediment/ Mechelle Anderson | M/G | TM (7) | 598858 (Ice Only) (1) | H/WS-01-05 | S: | 7/15/2002 14:25 | E21L8 | |
| ME21L9 | Soil/Sediment/ Mechelle Anderson | M/G | TM (7) | 598862 (Ice Only) (1) | H/WS-02-06 | S: | 7/15/2002 15:32 | E21L9 | |
| ME21M0 | Soil/Sediment/ Mechelle Anderson | M/G | TM (7) | 598866 (Ice Only) (1) | H/WS-02-07 | S: | 7/15/2002 15:32 | E21M0 | |
| ME21M1 | Soil/Sediment/ Mechelle Anderson | M/G | TM (7) | 598870 (Ice Only) (1) | H/WS-02-08 | S: | 7/15/2002 15:32 | E21M1 | |

256

| | | | | |
|--|--|---|--|--|
| Shipment for Case Complete? <input type="checkbox"/> | Sample(s) to be used for laboratory QC: | Additional Sampler Signature(s): | Cooler Temperature Upon Receipt: 6.22 | Chain of Custody Seal Number: 87/22/87/23 |
| Analysis Key: TM = CLP TAL Total Metals | Concentration: L = Low, M = Low/Medium, H = High | Type/Designate: Composite = C, Grab = G | Custody Seal Intact? <input checked="" type="checkbox"/> | Shipment Iced? <input checked="" type="checkbox"/> |

TR Number: 5-343595582-071602-0003

PR provides preliminary results. Requests for preliminary results will increase analytical costs.
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LABORATORY COPY



USEPA Contract Laboratory Program
Organic Traffic Report & Chain of Custody Record

Case No: 30721
DAS No:
SDG No: Ed/mw **L**

| | | | | |
|---|-----------------------------------|------------------------------------|---------------------------------------|---|
| Date Shipped: 7/16/2002 Carrier Name: FedEx Airbill: 827673148924 Shipped to: Clayton Environmental Consultants, Inc 22345 Roethel Drive Novi MI 48375 (248) 344-1770 | Chain of Custody Record | | Sampler Signature: <i>Annie Peste</i> | For Lab Use Only 68W99069 Lab Contract No: 689903 7-17-02 Unit Price: \$649.00 Transfer To: Lab Contract No: Unit Price: |
| | Relinquished By (Date / Time) | Received By (Date / Time) | | |
| | 1 <i>Annie Peste</i> 7/16/02 1300 | | | |
| | 2 | <i>Erica Jones</i> 7-17-02 10:00am | | |
| | 3 | | | |
| 4 | | | | |

| ORGANIC SAMPLE No. | MATRIX/ SAMPLER | CONC/ TYPE | ANALYSIS/ TURNAROUND | TAG No./ PRESERVATIVE | STATION LOCATION | SAMPLE COLLECT DATE/TIME | INORGANIC SAMPLE No. | FOR LAB USE ONLY Sample Condition On Receipt |
|-----------------------|--|---------------|--------------------------|---|---------------------|--------------------------------|-------------------------|---|
| E21L1 | Soil/Sediment/ Mechelle Anderson | M/G | BNAP/EST (7), VOA (7) | 598837 (Ice Only), 598838 (Ice Only) (2) | WS-03-01 | S: 7/14/2002 14:17 | ME21L1 | |
| E21L2 | Soil/Sediment/ Mechelle Anderson | M/G | BNAP/EST (7), VOA (7) | 598840 (Ice Only), 598841 (Ice Only) (2) | WS-03-02 | S: 7/14/2002 14:19 | ME21L2 | |
| E21L3 | Soil/Sediment/ Mechelle Anderson | M/G | BNAP/EST (7), VOA (7) | 598843 (Ice Only), 598844 (Ice Only) (2) | WS-01 | S: 7/13/2002 15:52 E: 15:52 | ME21L3 | |
| E21L4 | Soil/Sediment/ Mechelle Anderson | M/G | BNAP/EST (7), VOA (7) | 598846 (Ice Only), 598847 (Ice Only) (2) | HWS-01-01 | S: 7/15/2002 11:15 | ME21L4 | |
| E21L5 | Soil/Sediment/ Mechelle Anderson | M/G | BNAP/EST (7), VOA (7) | 598849 (Ice Only), 598850 (Ice Only) (2) | HWS-01-02 | S: 7/15/2002 11:20 | ME21L5 | |
| E21L6 | Soil/Sediment/ Mechelle Anderson | M/G | BNAP/EST (7), VOA (7) | 598852 (Ice Only), 598853 (Ice Only) (2) | HWS-01-03 | S: 7/15/2002 11:52 | ME21L6 | |

COPY
Original Documents
are in *CFE 21K01 30721*
g *7-17-02*

| | | | | |
|---|--|---|--|---|
| Shipment for Case Complete? N | Sample(s) to be used for laboratory QC: | Additional Sampler Signature(s): | Cooler Temperature Upon Receipt: 8.8 | Chain of Custody Seal Number: 87120 <i>AP 8/2/02 87121</i> |
| Analysis Key: | Concentration: L = Low, M = Low/Medium, H = High | Type/Designate: Composite = C, Grab = G | Custody Seal Intact? <input checked="" type="checkbox"/> | Shipment Iced? <input checked="" type="checkbox"/> |
| BNAP/EST = CLP TCL Semivolatiles and Pesticides/PC, VOA = CLP TCL Volatiles | | | | |

TR Number: 5-343595582-071602-0002

PR provides preliminary results. Requests for preliminary results will increase analytical costs.
Send Copy to: Contract Laboratory Analytical Services Support, 2000 Edmund Halley Dr., Reston, VA. 20191-3436 Phone 703/264-9348 Fax 703/264-9222

Cooler 1



USEPA Contract Laboratory Program
Organic Traffic Report & Chain of Custody Record

Case No: 30721
DAS No:
SDG No: F21MO L

| | | | | |
|---|-----------------------------------|-------------------------------------|---------------------------------------|---|
| Date Shipped: 7/16/2002 Carrier Name: FedEx Airbill: 827673148902 Shipped to: Clayton Environmental Consultants, Inc 22345 Roethel Drive Novi MI 48375 (248) 344-1770 | Chain of Custody Record | | Sampler Signature: <i>Annie Resto</i> | For Lab Use Only Lab Contract No: 68W99069 Unit Price: \$649.00 Transfer To: Lab Contract No: Unit Price: |
| | Relinquished By (Date / Time) | Received By (Date / Time) | | |
| | 1 <i>Annie Resto 7/16/02 1300</i> | | | |
| | 2 | <i>Erica Jones 7-17-02 10:00 AM</i> | | |
| | 3 | | | |
| 4 | | | | |

| ORGANIC SAMPLE No. | MATRIX/ SAMPLER | CONC/ TYPE | ANALYSIS/ TURNAROUND | TAG No./ PRESERVATIVE | STATION LOCATION | SAMPLE COLLECT DATE/TIME | | INORGANIC SAMPLE No. | FOR LAB USE ONLY Sample Condition On Receipt |
|-----------------------|--|---------------|-------------------------------|---|---------------------|-----------------------------|-------|-------------------------|---|
| E21L7 | Soil/Sediment/ Mechelle Anderson | M/G | BNA (7), PEST (7), VOA (7) | 598855 (Ice Only), 598856 (Ice Only), 598857 (Ice Only) (3) | H/WS-01-04 | S: 7/15/2002 | 14:10 | ME21L7 | |
| E21L8 | Soil/Sediment/ Mechelle Anderson | M/G | BNA (7), PEST (7), VOA (7) | 598859 (Ice Only), 598860 (Ice Only), 598861 (Ice Only) (3) | H/WS-01-05 | S: 7/15/2002 | 14:25 | ME21L8 | |
| E21L9 | Soil/Sediment/ Mechelle Anderson | M/G | BNA (7), PEST (7), VOA (7) | 598863 (Ice Only), 598864 (Ice Only), 598865 (Ice Only) (3) | H/WS-02-06 | S: 7/15/2002 | 15:32 | ME21L9 | |
| E21M0 | Soil/Sediment/ Mechelle Anderson | M/G | BNA (7), PEST (7), VOA (7) | 598867 (Ice Only), 598868 (Ice Only), 598869 (Ice Only) (3) | H/WS-02-07 | S: 7/15/2002 | 15:32 | ME21M0 | |
| *E21M1 | Soil/Sediment/ Mechelle Anderson | M/G | BNA (7), PEST (7), VOA (7) | 598871 (Ice Only), 598872 (Ice Only), 598873 (Ice Only) (3) | H/WS-02-08 | S: 7/15/2002 | 15:32 | ME21M1 | |

Last sample in SDG

COPY
Original Documents
are in CSF E21K0/2022
7-17-02

| | | | | |
|---|--|---|--|--|
| Shipment for Case Complete? N | Sample(s) to be used for laboratory QC: | Additional Sampler Signature(s): | Cooler Temperature Upon Receipt: <i>5.0°C</i> | Chain of Custody Seal Number: <i>87124/87125</i> |
| Analysis Key: | Concentration: L = Low, M = Low/Medium, H = High | Type/Designate: Composite = C, Grab = G | Custody Seal Intact? <input checked="" type="checkbox"/> | Shipment Iced? <input checked="" type="checkbox"/> |
| BNA = CLP TCL Semivolatiles, PEST = CLP TCL Pesticide/PCBs, VOA = CLP TCL Volatiles | | | | |

TR Number: 5-343595582-071602-0004

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Center 2



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| | | | | |
|---|--|------------------------|---|--|
| Date Shipped: 7/15/2002 Carrier Name: FedEx Airbill: 827673148935 Shipped to: Clayton Environmental Consultants, Inc 22345 Roethel Drive Novi MI 48375 (248) 344-1770 | Chain of Custody Record | | For Lab Use Only | |
| | Relinquished By (Date / Time) 1 <u>Annie Pesta 7/15/02 1930</u> | | Sampler Signature: Received By (Date / Time) <u>E. J. Jones 7-16-02 9:52 AM</u> | |
| | 2 | | Lab Contract No: <u>CE8W99069</u> | |
| | 3 | | Unit Price: <u>\$ 649.00</u> | |
| | 4 | | Transfer To: _____ | |
| | | Lab Contract No: _____ | | |
| | | Unit Price: _____ | | |

| ORGANIC SAMPLE No. | MATRIX/ SAMPLER | CONC/ TYPE | ANALYSIS/ TURNAROUND | TAG No./ PRESERVATIVE | STATION LOCATION | SAMPLE COLLECT | | | INORGANIC SAMPLE No. | FOR LAB USE ONLY Sample Condition On Receipt |
|-----------------------|--|---------------|--------------------------|---|---------------------|----------------|-----------|-------|-------------------------|---|
| | | | | | | DATE/TIME | | | | |
| E21K0 | Soil/Sediment/ Mechelle Anderson | M/G | BNA/PEST (7), VOA (7) | 598804 (Ice Only), 598805 (Ice Only) (2) | WS-01-01 | S: | 7/13/2002 | 10:32 | ME21K0 | |
| E21K1 | Soil/Sediment/ Mechelle Anderson | M/G | BNA/PEST (7), VOA (7) | 598807 (Ice Only), 598808 (Ice Only) (2) | WS-01-02 | S: | 7/13/2002 | 10:32 | ME21K1 | |
| E21K2 | Soil/Sediment/ Mechelle Anderson | M/G | BNA/PEST (7), VOA (7) | 598810 (Ice Only), 598811 (Ice Only) (2) | WS-01-03 | S: | 7/13/2002 | 10:32 | ME21K2 | |
| E21K3 | Soil/Sediment/ Mechelle Anderson | M/G | BNA/PEST (7), VOA (7) | 598813 (Ice Only), 598814 (Ice Only) (2) | WS-01-04 | S: | 7/13/2002 | 14:20 | ME21K3 | |
| E21K4 | Soil/Sediment/ Mechelle Anderson | M/G | BNA/PEST (7), VOA (7) | 598816 (Ice Only), 598817 (Ice Only) (2) | WS-01-05 | S: | 7/13/2002 | 14:45 | ME21K4 | |
| E21K5 | Soil/Sediment/ Mechelle Anderson | M/G | BNA/PEST (7), VOA (7) | 598819 (Ice Only), 598820 (Ice Only) (2) | WS-01-06 | S: | 7/13/2002 | 15:10 | ME21K5 | |
| E21K6 | Soil/Sediment/ Mechelle Anderson | M/G | BNA/PEST (7), VOA (7) | 598822 (Ice Only), 598823 (Ice Only) (2) | WS-01-07 | S: | 7/13/2002 | 15:52 | ME21K6 | |
| E21K7 | Soil/Sediment/ Mechelle Anderson | M/G | BNA/PEST (7), VOA (7) | 598825 (Ice Only), 598826 (Ice Only) (2) | WS-01-08 | S: | 7/13/2002 | 16:15 | ME21K7 | |
| E21K8 | Soil/Sediment/ Mechelle Anderson | M/G | BNA/PEST (7), VOA (7) | 598828 (Ice Only), 598829 (Ice Only) (2) | WS-01-09 | S: | 7/13/2002 | 16:25 | ME21K8 | |
| E21K9 | Soil/Sediment/ Mechelle Anderson | M/G | BNA/PEST (7), VOA (7) | 598831 (Ice Only), 598832 (Ice Only) (2) | WS-02-01 | S: | 7/14/2002 | 10:15 | ME21K9 | |

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|---|--|---|--|--|
| Shipment for Case Complete? N | Sample(s) to be used for laboratory QC: | Additional Sampler Signature(s): | Cooler Temperature Upon Receipt: 8.5°C | Chain of Custody Seal Number: 87112/87113 |
| Analysis Key: | Concentration: L = Low, M = Low/Medium, H = High | Type/Designate: Composite = C, Grab = G | Custody Seal Intact? <input checked="" type="checkbox"/> | Shipment Iced? <input checked="" type="checkbox"/> |
| BNA/PEST = CLP TCL Semivolatiles and Pesticides/PC, VOA = CLP TCL Volatiles | | | | |

TR Number: 5-343595582-071402-0001

PR provides preliminary results. Requests for preliminary results will increase analytical costs.

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USEPA Contract Laboratory Program
Organic Traffic Report & Chain of Custody Record

Case No: 30721

DAS No:

SDG No:

E21K0

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| | | | | | |
|---|--------------------------------|---------------|---------------------------|---|----------------|
| Date Shipped: 7/15/2002 Carrier Name: FedEx Airbill: 827673148935 Shipped to: Clayton Environmental Consultants, Inc 22345 Roethel Drive Novi MI 48375 (248) 344-1770 | Chain of Custody Record | | Sampler Signature: | For Lab Use Only Lab Contract No: 108W99069 Unit Price: \$1649.00 Transfer To: _____ Lab Contract No: _____ Unit Price: _____ | |
| | Relinquished By | (Date / Time) | Received By | | (Date / Time) |
| | 1 Annie Pesto | 7/15/02 1930 | Erica Joo | | 7-16-02 9:52AM |
| | 2 | | | | |
| | 3 | | | | |
| 4 | | | | | |

| ORGANIC SAMPLE No. | MATRIX/ SAMPLER | CONC/ TYPE | ANALYSIS/ TURNAROUND | TAG No./ PRESERVATIVE | STATION LOCATION | SAMPLE COLLECT DATE/TIME | INORGANIC SAMPLE No. | FOR LAB USE ONLY Sample Condition On Receipt |
|-----------------------|--|---------------|--------------------------|---|---------------------|-----------------------------|-------------------------|---|
| E21L0 | Soil/Sediment/ Mechelle Anderson | M/G | BNA/PEST (7), VOA (7) | 598834 (Ice Only), 598835 (Ice Only) (2) | WS-02-02 | S: 7/14/2002 10:57 | ME21L0 | |

0004

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|-------------------------------|--|---|--|--|
| Shipment for Case Complete? N | Sample(s) to be used for laboratory QC: | Additional Sampler Signature(s): | Cooler Temperature Upon Receipt: 8.5°C | Chain of Custody Seal Number: 87112/87113 |
| Analysis Key: | Concentration: L = Low, M = Low/Medium, H = High | Type/Designate: Composite = C, Grab = G | Custody Seal Intact? <input checked="" type="checkbox"/> | Shipment Iced? <input checked="" type="checkbox"/> |

BNA/PEST = CLP TCL Semivolatiles and Pesticides/PC, VOA = CLP TCL Volatiles

TR Number: 5-343595582-071402-0001

PR provides preliminary results. Requests for preliminary results will increase analytical costs.
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USEPA Contract Laboratory Program Organic Traffic Report & Chain of Custody Record

Case No: 30721

DAS No:

SDG No:

E21K0

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|---|--------------------------------|---------------|---------------------------------------|---|------------------|
| Date Shipped: 7/16/2002 Carrier Name: FedEx Airbill: 827673148924 Shipped to: Clayton Environmental Consultants, Inc 22345 Roethel Drive Novi MI 48375 (248) 344-1770 | Chain of Custody Record | | Sampler Signature: <i>Annie Pesto</i> | For Lab Use Only Lab Contract No: 68W99069 Unit Price: \$649.00 Transfer To: Lab Contract No: Unit Price: | |
| | Relinquished By | (Date / Time) | Received By | | (Date / Time) |
| | 1 <i>Annie Pesto</i> | 7/16/02 1300 | | | |
| | 2 | | <i>Erica Yates</i> | | 7-17-02 10:07 AM |
| | 3 | | | | |
| 4 | | | | | |

| ORGANIC SAMPLE No. | MATRIX/ SAMPLER | CONC/ TYPE | ANALYSIS/ TURNAROUND | TAG No./ PRESERVATIVE | STATION LOCATION | SAMPLE COLLECT DATE/TIME | | INORGANIC SAMPLE No. | FOR LAB USE ONLY Sample Condition On Receipt |
|-----------------------|--|---------------|--------------------------|---|---------------------|-----------------------------|-------|-------------------------|---|
| E21L1 | Soil/Sediment/ Mechelle Anderson | M/G | BNA/PEST (7), VOA (7) | 598837 (Ice Only), 598838 (Ice Only) (2) | WS-03-01 | S: 7/14/2002 | 14:17 | ME21L1 | |
| E21L2 | Soil/Sediment/ Mechelle Anderson | M/G | BNA/PEST (7), VOA (7) | 598840 (Ice Only), 598841 (Ice Only) (2) | WS-03-02 | S: 7/14/2002 | 14:19 | ME21L2 | |
| E21L3 | Soil/Sediment/ Mechelle Anderson | M/G | BNA/PEST (7), VOA (7) | 598843 (Ice Only), 598844 (Ice Only) (2) | WS-01 | S: 7/13/2002 E: 15:52 | 15:52 | ME21L3 | |
| E21L4 | Soil/Sediment/ Mechelle Anderson | M/G | BNA/PEST (7), VOA (7) | 598846 (Ice Only), 598847 (Ice Only) (2) | H/WS-01-01 | S: 7/15/2002 | 11:15 | ME21L4 | |
| E21L5 | Soil/Sediment/ Mechelle Anderson | M/G | BNA/PEST (7), VOA (7) | 598849 (Ice Only), 598850 (Ice Only) (2) | H/WS-01-02 | S: 7/15/2002 | 11:20 | ME21L5 | |
| E21L6 | Soil/Sediment/ Mechelle Anderson | M/G | BNA/PEST (7), VOA (7) | 598852 (Ice Only), 598853 (Ice Only) (2) | H/WS-01-03 | S: 7/15/2002 | 11:52 | ME21L6 | |

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|---|--|---|--|--|
| Shipment for Case Complete? <input checked="" type="checkbox"/> N | Sample(s) to be used for laboratory QC: | Additional Sampler Signature(s): | Cooler Temperature Upon Receipt: 8.8°C | Chain of Custody Seal Number: 87120 87121 |
| Analysis Key: | Concentration: L = Low, M = Low/Medium, H = High | Type/Designate: Composite = C, Grab = G | Custody Seal Intact? <input checked="" type="checkbox"/> | Shipment Iced? <input checked="" type="checkbox"/> |
| BNA/PEST = CLP TCL Semivolatiles and Pesticides/PC, VOA = CLP TCL Volatiles | | | | |

TR Number: 5-343595582-071602-0002

PR provides preliminary results. Requests for preliminary results will increase analytical costs.

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USEPA Contract Laboratory Program Organic Traffic Report & Chain of Custody Record

Case No: 30721

DAS No:

SDG No:

E21K0

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|---|--------------------------------|---------------------|---------------------------------------|-------------------------|----------------------------------|
| Date Shipped: 7/16/2002 Carrier Name: FedEx Airbill: 827673148902 Shipped to: Clayton Environmental Consultants, Inc 22345 Roethel Drive Novi MI 48375 (248) 344-1770 | Chain of Custody Record | | Sampler Signature: <i>Annie Resto</i> | For Lab Use Only | |
| | Relinquished By | (Date / Time) | Received By | (Date / Time) | Lab Contract No: <i>68W99068</i> |
| | 1 <i>Annie Resto</i> | <i>7/16/02 1300</i> | | | Unit Price: <i>\$1649.00</i> |
| | 2 | | <i>Eric Gayer</i> | <i>7-18-02</i> | Transfer To: |
| | 3 | | | <i>10:02 AM</i> | Lab Contract No: |
| 4 | | | | Unit Price: | |

| ORGANIC SAMPLE No. | MATRIX/ SAMPLER | CONC/ TYPE | ANALYSIS/ TURNAROUND | TAG No./ PRESERVATIVE | STATION LOCATION | SAMPLE COLLECT DATE/TIME | | INORGANIC SAMPLE No. | FOR LAB USE ONLY Sample Condition On Receipt |
|-----------------------|--|---------------|-------------------------------|---|---------------------|-----------------------------|-----------------|-------------------------|---|
| E21L7 | Soil/Sediment/ Mechelle Anderson | M/G | BNA (7), PEST (7), VOA (7) | 598855 (Ice Only), 598856 (Ice Only), 598857 (Ice Only) (3) | H/WS-01-04 | S: | 7/15/2002 14:10 | ME21L7 | |
| E21L8 | Soil/Sediment/ Mechelle Anderson | M/G | BNA (7), PEST (7), VOA (7) | 598859 (Ice Only), 598860 (Ice Only), 598861 (Ice Only) (3) | H/WS-01-05 | S: | 7/15/2002 14:25 | ME21L8 | |
| *E21L9 | Soil/Sediment/ Mechelle Anderson | M/G | BNA (7), PEST (7), VOA (7) | 598863 (Ice Only), 598864 (Ice Only), 598865 (Ice Only) (3) | H/WS-02-06 | S: | 7/15/2002 15:32 | ME21L9 | |
| E21M0 | Soil/Sediment/ Mechelle Anderson | M/G | BNA (7), PEST (7), VOA (7) | 598867 (Ice Only), 598868 (Ice Only), 598869 (Ice Only) (3) | H/WS-02-07 | S: | 7/15/2002 15:32 | ME21M0 | |
| E21M1 | Soil/Sediment/ Mechelle Anderson | M/G | BNA (7), PEST (7), VOA (7) | 598871 (Ice Only), 598872 (Ice Only), 598873 (Ice Only) (3) | H/WS-02-08 | S: | 7/15/2002 15:32 | ME21M1 | |

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*Just sample
in SDG 7-17-02*

| | | | | |
|---|--|---|--|--|
| Shipment for Case Complete? N | Sample(s) to be used for laboratory QC: | Additional Sampler Signature(s): | Cooler Temperature Upon Receipt: <i>5.0°C</i> | Chain of Custody Seal Number: <i>87124/87125</i> |
| Analysis Key: | Concentration: L = Low, M = Low/Medium, H = High | Type/Designate: Composite = C, Grab = G | Custody Seal Intact? <input checked="" type="checkbox"/> | Shipment Iced? <input checked="" type="checkbox"/> |
| BNA = CLP TCL Semivolatiles, PEST = CLP TCL Pesticide/PCBs, VOA = CLP TCL Volatiles | | | | |

TR Number: 5-343595582-071602-0004

PR provides preliminary results. Requests for preliminary results will increase analytical costs.

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